

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[PRICE 6d.]

Original Correspondence.

COLLIERY ACCIDENTS.—GOVERNMENT INSPECTORS.

Sir,—In answer to the many theorists who are clamouring for an increased number of inspectors for the coal mines, I send you the result of the quarter ending March 31st, in the counties of Durham, Northumberland, and Cumberland, and it will be seen how creditably the Act is working in those counties, as contrasted with former periods. The character of the accidents, too, must be appreciated, as regards the effect of additional inspection, which is mainly expected to operate against explosions by bringing about salutary arrangements regarding ventilation, and a good and effective check over the use and abuse of safety-lamps.

The most important loss of deaths, it will be seen, arises from falls of roof, which occur chiefly in the taking away of pillars, and in collieries containing most undesirable arrangements for the safety of the people; but several of these deaths occur to the very overmen and deputies, whose judgment and experience are undoubted, but who are taken by surprise in dealing with the roof. Under the head of sundries are contained boys killed by the crush of tubs, the kick of horses, the getting entangled with the machinery, &c., both above and below ground; and my object in giving you this statement is to impress upon every reflecting person how needlessly unavailing the multiplication of inspectors will be in such a district as this.

I do not mean to deny, at the same time, that in several other of the districts additional experienced inspectors would tend to good, and also that the Act may be in many respects improved; therefore, it would be well for persons affecting to feel an interest in the question to take such matters into consideration, and not confound the case of a well organised district with districts quite the reverse.

Newcastle-on-Tyne, April 25.

MATTHIAS DUNN, Mine Inspector.

Comparative results of mine inspection for the counties of Durham, Northumberland, and Cumberland, taking the quarter ending 31st March; and the average of former half-years since the passing of the Act:—

	Quar. end. Mar. 31.	for half-year.	Aver. of former half-years.
Accidents in shafts	2	4	13
Explosions	2	4	16
Choke-damp	—	—	14
Falls of stone and coal	8	16	23
Sundries	17	34	22½
Total	27	54	74

GOVERNMENT MINE INSPECTION.

Sir,—The session of Parliament wears on—time passes away—the sacrifice of life in the coal mines of this country continues—parliamentary committees, after “dragging, like a wounded snake, their slow length along,” make a report, urging immediate legislation—inspectors of mines publish reports of their experience, showing clearly that little or no diminution of the loss of life has taken place—yet the new Mines Inspection Bill is still in abeyance. At the meeting of Parliament in December last, a deputation of colliers waited upon Mr. Fitzroy, M.P., and presented through that gentleman, a memorial (referred to in a leading article), setting forth the repeated applications made by the miners for extended and more stringent legislation. The reply to the deputation was, that the short session at that time, called upon very important public business, prevented attention to the miners’ bills; but at the meeting of Parliament after the new year or Christmas recess, it would be immediately introduced. Hope was again revived in the miners’ breast that we were approaching the end of the long delay. Parliament again assembled—other business occupied the attention of the Government—changes took place—correspondence was instituted with Mr. Hutchinson, M.P., as chairman of the parliamentary committee, and from which it was ascertained that the bill was ready, and would forthwith be introduced; but further information brought out the fact that Mr. Fitzroy, the Under-Secretary of State, had resigned, and that Sir George Grey would now have to bring in the bill. Subsequently, we were told that Sir G. Grey had the intention to amalgamate the new and the old bills, and thus would be prevented from introducing the measure until after Easter. Alas for the poor colliers! Secretaries of State and Government officials do not go down the pits, or perhaps such delays would not arise. After Easter has come, I have carefully watched the parliamentary notices, but cannot find anything about the introduction of the Mines Inspection Bill. How long have the miners to wait? What extent of sacrifice of human life will appear on the means of safety? What sacrifice of health will get up the steam of prevention? Will the reports of the inspectors—the paper of a Mackworth—the cries of the widows—the tears of the orphans—not induce speedy legislation? Let the Government ponder on the responsibility of this delaying to save from destruction the hundreds and thousands of a most patient and industrious class of men, and at once set to work to save in future such destruction of life.

It will be seen by the memorial that the miners are extremely anxious for something to be done; and although the question to them is one of life or death, yet it is to be hoped they put forth nothing impossible nor impracticable; and should the new measure not come up to the standard thus laid down, then shall we still continue to witness little or no diminution of the fatal accidents in collieries, nor shall the colliers breathe an atmosphere less impure. As it is the expressed intention of the employers to meet in London when the bill is printed, with a view, no doubt, to watch over their interests, &c., it is also intended that the miners or workmen have a deputation there at the same time, that the body they represent may have the fullest amount of security awarded in the provisions of that measure. MARTIN JONES.

April 25.

COMBINATIONS OF IRON AND CARBON.

Sir,—In all reports that have come under my notice with respect to the proportion of carbon in pig or cast-iron, the discrepancies are so great and numerous, that to put dependence upon such reports would appear to be something very like trusting to a rope of sand. In proof of this opinion of the matter, allow me to give a list of ten analyses of cast-iron, by continental chemists (and the list may be very much extended if at all necessary), as far as concerns the proportions of iron and carbon, be the state of such combinations whatever it may:—

White cast-iron	Iron.	Carbon.	Aggr.	Iron.	Carbon.	p. ct.	Analyst.
Grey ditto	—	—	—	94.78	5.22	100.	Karsten.
Grey ditto	—	—	—	96.83	3.17	100.	ditto
Quality not given	93.60	3.05	96.95	96.90	3.10	100.	Svanberg
Grey	96.00	2.00	98.00	97.96	2.04	100.	Bergman
White	98.00	1.20	99.20	98.76	1.24	100.	ditto
Mottled	98.40	0.80	99.20	99.19	0.81	100.	Gazner
Ditto	98.80	0.30	99.30	99.43	0.55	100.	Berthier
Grey	99.20	0.40	99.60	99.59	0.41	100.	Gazner
Mottled	99.50	0.30	99.70	99.79	0.21	100.	ditto

Here we have a list of combinations of iron and carbon, by parties whose names stand as high authority in the chemical and metallurgical community, ranging from 0.21 to 5.22 per cent. of carbon, and therefore, from 94.78 to 99.79 of iron; the sample No. 10 was represented as English pig-iron. Now, from the above representations, we are almost unavoidably led to the inference that the unions of carbon and iron are not subject to the law of “atomic combinations”—a conclusion that would open the way for a retrograding march from light to comparative darkness, with regard to our present metallurgical knowledge. To such a conclusion, however, I am prepared to demur; and my reasons for doing so are, that definite compounds of carbon and iron may be much more satisfactorily accounted for than they are at present, by instituting a new scale of the combining proportions of carbon with metals generally—that is, a carbon scale: taking one by weight of the element as the prime, or starting point, instead of six, and leaving the atomic number of the metals to remain as they now stand on Dr. Wollaston’s “hydrogen scale.” By arrangements of this kind we should be able to work out results much nearer to the actual state of things in our analysis of cast-iron, and yet keep within the range of definite and well-defined proportions with respect to its elements—for instance (say),

1 lb. of carbon, combined with 28 lbs. of iron, to form 29 lbs. proto-carburet, would be in the ratio of 96.35 iron and 3.65 carbon per cent.

3 lbs. of carbon, combined with 56 lbs. of iron, to form 59 lbs. sesqui-carburet of iron, would be in the ratio of 94.91 iron and 5.09 carbon per cent.

2 lbs. of carbon, combined with 28 lbs. of iron, to form 30 lbs. per-carburet of iron, would be in the ratio of 93.33 iron and 6.66 carbon per cent.

That difficulties may arise from working upon these suggestions I have not the slightest doubt; but if we are to be deterred from broaching new and important ideas or things in any branch of knowledge, merely because a few difficulties may, on a first view of the matter, appear to stand in the way of their introduction: then farewell to every hope of improvement from either moral or physical exertions.

The suggested combinations may, in the new “carbon scale,” be run up from 1 to 6 lbs. of carbon to 28 lbs. of iron, or from 28 to 56, 84 and up to 196 lbs. of iron to 1 lb. of carbon; this last combination—that is, 99.5 iron and 0.5 carbon—would appear very accurately represent the proportions of carbon in blistered steel—namely, 1.300th part, as made at the Monkland Steel-Works. The late Mr. D. Mushet stated the proportions of carbon in pig-iron as follows:—

White cast-iron	1.35th	96 iron	4 carbon
Mottled ditto	1.30th	95	5
Dark grey	1.15th	93.33	6.66

Now these proportions of carbon in the white and mottled iron are very nearly the same as the proto and sesqui-carburets above mentioned, and the dark grey compound corresponds exactly with the hypothetical per-carburet. If any of your able correspondents, or others, would assist in clearing up the discrepancies alluded to in the communication, with the view of clearing the atomic combinations of carbon and iron (sulphur and phosphorus “scales” may also be instituted with advantage) from the doubts and difficulties in which they at present would appear to be involved, it would afford me, and, no doubt, many others, much satisfaction.—Newcastle-on-Tyne, April 24.

S. B. ROBERTS.

MR. HOPKINS'S PRINCIPLES OF GEOLOGY, AND THEORY

OF MINERAL VEINS.

Sir,—As a student in the science of mining I am naturally interested in all discussions on metalliferous formations, that appear in your excellent Journal. I take great pleasure in reading Mr. Ennor’s remarks on the subject, inasmuch as his observations and experience tend to confirm the principles propounded in Mr. E. Hopkins’s *Geology and Magnetism*, which I now study, and which are more in accordance with what we see than any other theory.

With your permission, I send you the following extract, and shall continue the same next week, with the hopes of their eliciting further information on this very interesting and important subject connected with mining. A MINING STUDENT.

ON MINERAL VEINS, THEIR FORMATION, GENERAL CHARACTER, AND CONTENTS.

Besides the conflicting opinions respecting the origin of mineral veins, much confusion has also arisen from the very loose nomenclature applied by miners to the terms veins or lodes. Such terms are often given to almost every kind of mineral deposit which affords a foundation for mining operations, however widely they may differ in character from the definition of lodes in the ordinary sense in which they are described. In fact, the mere detection of a crystal of mineral in a rock, and more especially small and small nodules of minerals and metals enclosed in quartz, or in the cleavage of the slaty rocks, is sufficient to cause some persons to conclude that there must be a metalliferous lode in the vicinity to produce such minerals. They suppose minerals are only come from veins or lodes, and not from the rocks; and again, when small masses of ore are discovered in slates, however insignificant they

may be, it is concluded that there must be not only lodes, but unequivocal indications of richness in depth also. These notions, it is true, are encouraged more by mining jobs than practical men, and are, unfortunately, the means by which a deceitful and injurious system of mining is carried on both at home and abroad, at the expense of the unwary capital of the public, and to the injury of the honest and industrious, as well as to the injury of legitimate mining in general, and disgrace to English enterprise. It has been already stated that the rock is the parent of the mineral—i.e., that it is the soil, as it were, out of which the minerals grow, with the exception of what may be brought in addition by aqueous conductors from more distant sources; and from the appearance of the rock, in chemical composition and texture, or internal structure, we can determine its mineral production. The manner in which the metallic or mineral products become developed depends on mechanical causes, local conditions, the internal compactness, the degrees of aqueous saturation, the aggregation of the crystalline compound, and the pores or cravice planes. We have already shown how metals are produced and liberated from rocks by disintegration and decomposition, and shall now explain the formation of sulphuretted ores, in the figures of rocks, from mere joints to the magnitude of great lodes. Sulphurets were formerly considered as scarcely expellable in the wet way, sulphur being supposed insoluble in water; but we find innumerable springs holding sulphur in solution, such as sulphuretted hydrogen, besides the gas which abounds in the carboniferous deposits, explained in another chapter. All metals are held in solution in a weak alkaline mixture, and in different compounds. Carbonates of lead is soluble in alkali and lime, and precipitates therefrom by sulphuretted hydrogen. Lead has a greater affinity for lime than for any other earth; hence limestone formations, generally speaking, contain lead in preference to other metals; and where they become saturated with sulphuretted hydrogen, whether as gas or as liquid, the lead is separated as a sulphuret. Marshes are also usually more productive of masses of lead ore than the higher and drier parts of the rock. The carbonate of lime not only accompanies galena, or sulphuret of lead, in the limestone rocks, but also very frequently in the clay-slate and porphyritic formations, as a matrix of the ore. The most pure metals, when sufficiently divided, are soluble in water; and it has been shown that silver, as well as mercury, lead, and copper, &c., are taken up by water and deposited on the surface of rifts, as in the Christiania Mines, in Norway, in Peru, Chili, and in numbers of other mining districts. When, therefore, water impregnated with sulphur meets with the same element charged with metals, permeating the joints and pores of the rocks, precipitation necessarily takes place, and a new compound formed in accordance with the laws of affinity. This formation of sulphurets is again subject to be dissolved and dispersed by an alkaline reaction, as observed in many instances in mines and caverns. In Peru and Chili pieces of wood that for years had been left standing in old mines have been found partially converted into siliceous fossils, and others again covered only with calcareous spars, metallic silver, grey and red silver ores, and fine crystals of iron pyrites, by solutions from metalliferous rocks. New crystals of pyrites, both iron and copper, have been found in the old decomposed heaps of pyrites refuse in South America, formed during decomposition. Arsenic (sulphuretted water) has been detected, not only in foreign countries, but also in Cornwall and Devon. Antimony has been found in a state of solution in the mine of Santa Cruz de Medellin, in Spain, and in many mines of the Americas. The sides or walls of the old mine at Mantsappel have been covered over with natural cinnamon that resembles the bark of the tree, and is of the same color. I have seen similar formations in the old workings of Marmato, in New Granada, and in an excavation at such an altitude in the rock as would not admit of its being filled with water; yet a thick ore, or an efflorescence of black ferruginous crystals, had been formed on the walls (analogous to the formation of nitrates on the wall of an old cellar) with a large proportion of fine grains of gold. At Wolfeloh Mine, in the county of Durham, which was closed for more than 20 years, and opened again, needles of white lead ore were observed projecting from the sides of the veins, more than 2 in. in length, being in fact equal to 2 in. thick, formed during 20 years. I have seen a similar kind of new production of carbonate of lead in the slate districts of North Wales, in Germany, and in the old Spanish workings in the silver mines of Mariquita, New Granada, accompanied with recent formation of mounds, not only under water, but in cavities considerably above the water-line.

[To be continued.]

NOTES ON MESSRS. HOPKINS AND ENNOR'S LETTERS.—No. II.

Sir,—Mr. Hopkins has, in your Journal of the 14th, attempted to controvert some remarks which I made in my letter of the 31st March, but to do so fairly he ought to have quoted me literally, and adduced such facts and reasons as bore directly on my expression and meaning, and not to have warped my ideas to some conception of his own mind, and proceeded to illustrate them accordingly. My views on the derivation of the ordinary ores found in mineral veins are so far contrary to those set forth by Mr. Ennor, that I do not believe either of the metallic ores of copper, tin, or lead, is infiltrated into veins from the adjacent compact unfractured rock, and I shall hold to this view, until the contrary is proved by some evidence really representative to the mind, without the tedious and fanciful hypotheses, or any dogmas advanced from incorrect or partial observation.

Mr. Hopkins may have seen cupreous matter issuing from the purple plates of Yaguanas, but does not say whether it was solely derived from the country proper, or proceeded from a proximate lode; had he traced it to its true source, or extended his investigations further and more generally, he would most probably have found the latter supposition to be correct. He admits the copper to be precipitated in the laminæ and joints of the rocks, observes that the joints of the soft siliceous granite of Cornwall remain in distance, and that the joints of the hard granite of the Cornish country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes that true mineral lodes are the exceptions to mineral deposits. Now, it happens that each case noticed, including the flakes of silver found in the country, will directly prove against Mr. Ennor’s theory, and that such rocks as we are acquainted with do not hold in themselves the menstrum of ordinary metalliferous ores or metals. Lodes, veins, pipes, flatings, stockworks, &c., will be found, if carefully examined, to be ramifications of veins or fissures, more or less remote in distance, and not connected with the surrounding ground, or the ground in the country (quartz, joints of country), notices the copper deposits surrounding Lake Superior, and inferentially concludes

be dismissed over again, and with the same result; for they would have to deal with the same warring and conflicting reports.

The CHAIRMAN observed that, after all, it was only a matter of pounds, shillings, and pence; Capt. Carpenter being of opinion that they ought to have 30s. a fathom, instead of the sum offered—viz., 25s.

After a protracted discussion, it was resolved, upon the motion of Col. Visleil, that the matter be referred back to the committee.

The CHAIRMAN observed that it would be seen by the report of Capt. Carpenter and Mr. Watson, that they had some very valuable stuff in the mine. The next sampling would be larger than any they had yet had. It would also be seen that they had rather a large balance at their bankers than on the last occasion. The accounts had been examined by auditors, and their signatures were attached.

The following is the statement of accounts for two months ending March:

Balance last account	£ 699 7 2	
Copper ore and carriage	2207 15 4	£2907 2 6
Less London stationery	£704 11	
Miner cost, Feb.	69 12 1	£774 6 2
Days	13 8 6	758 17 8
March cost	748 5 1	
Dues	75 18 3	
Dividend of 10s. per share, due 22d Feb. (less unpaid 14s.)	600 0 0	
Paid on account of old dividend	4 10 0	
Secretary, 11s. 11s. (less unpaid 8s. 8s.)	3 3 0	
Committee, 10s. 10s. (less unpaid 2s. 2s.)	8 8 0	
Auditors, 6s. 6s.; interest, &c., 11s. 11s. 10s.	8 0 10	2207 2 10
Balance at bankers	£699 19 8	
Assets—Cash at bankers	£699 19 8	
Bills receivable at bankers	967 11 10	
Dup for carriage of ore	146 8 7	
Ore for sale (computed)	1147 10 0	£2901 10 1
Liabilities—Due on old dividends	30 12 6	
Due on eight dividends	14 0 0	
Due to secretary	8 8 0	
Due to committee	2 2 0	
S. Richards	3 3 0	
London stationery	15 8 6	73 14 0
Amount of assets over liabilities	£2887 16 1	

Mr. BURLS begged to call the attention of the meeting to the admirable manner in which the accounts had been prepared. It was the true characteristic of the Cost-book System, such as the Vice-Warden had recently suggested, and so long as they had good auditors it was impossible to get into any mistake.

A dividend was then declared of 10s. per share, free of income tax.

Col. VISLEIL proposed a special vote of thanks to the committee, to whose exertions he considered they were under great obligations.—Carried unanimously.

The committee was re-elected, and a cordial vote of thanks to the chairman terminated the proceedings.

POLTIMORE COPPER MINING COMPANY.

The fifth half-yearly meeting of shareholders was held at 20, King-street, St. James's, on Wednesday, Mr. CHARLES HENKAGE in the chair.

Mr. CHORT (the secretary) read the notice convening the meeting, and the following report of the committee:—

The committee have to inform the shareholders, that since the last general meeting the workings of the mine have been carried on with activity, but not with so much vigour as we could have desired, arising from our resources having become limited, and the severity of the winter, which interfered with the pumps. It will be seen, from the annexed report, recently made by Mr. Marshall and Mr. Barker, that the large amount of labour has been through dead and heavy work. The reason which we now give for not having sold any ore, which we contemplated to have done at our last meeting, arises from the fact that, as the directors determined to erect stamping apparatus, the cleaning and spalling of the copper by hand was discontinued. The ore has, therefore, been accumulating, and will be stamped by this machinery at a much less expense.

Report made after a visit to the Poltimore Mine, on the 18th, 19th, and 20th April, by Mr. R. Barker and Mr. J. Marshall:—

The general appearance of the mine is much improved since the visit made in the autumn of last year. It is true the wheel of Captain Moorhouse stands out as conspicuous as ever in the valley, without any work being attached thereto, or any probability of tendering it useful of itself, and the pit, are badly constructed. The connecting rods intended to be attached to the wheel, such as the gudgeon bearing in the pedestal of the upright bolt, do not fit, and would not work, and the bearing brames in the sweep rod are only ½ inch, with no provision whatever for oiling, and would prevent their permanent usefulness. The new wheel, which we shall call the Maunders wheel, is now nearly finished; the house is at this moment slating it, and the crusher is ready to be put up, which this wheel is intended to work. The wheel pit is well formed, and substantially built, and when this work is done, the whole, with the crusher, will not exceed the estimate of £200,000. The pillars will be erected outside this building, and a winding machine will be attached for the purpose of drawing from the engine-shaft, instead of, as we are now doing, by horse power. The old wheel is still doing its work very well, and is fully adequate for any increase of work we may put upon it; we shall take half its water for the crushing wheel, which can be led by launders at a small expense. This water, so abstracted, can be easily supplied from sources thrown into the existing leet to supply permanently and adequately both wheels. In case of deficiency, launders could be put up across from the western side, and any quantity of water could be quickly made available. At this time an inclined road is making in the wood from the giggering and dressing floors to the crushing house to convey the ore for stamping. There are dressing floors and house are well placed on the eastern side. The ore accumulated for dressing, we are told by the captain of the mine, may reach 50 tons when cleaned for market, and will be worth from 12s. to 15s. per ton. The ore at the top of the shaft No. 3, on the western side, does not look so rich as we expected to see it, arising, we believe, from the derangement made by the slides in the 30 fm. level. We venture an opinion, that, if we stamp the gossan which contains the green carbonates, and which now lies piled up in immense heaps at the mouth of the eastern adit, that a considerable amount will be realised, although the average of its value may not exceed, when ready for market, more than 4s. per ton. We have directed a ton to be prepared and submitted to the necessary operations, to ascertain the truth or error of this opinion, and the expense thereof.

It occurs to us that our drawing expenses, which are now 14s. or 15s. per month, may be done at a much less cost by the purchase of two horses for the western side, as the drawing machine continues for a long time on it, considering the undeveloped state of the mine. Of the internal position of the mine, we beg to report that the engine-shaft has been sunk to the 60 fm. level, as directed. The men are now driving south to cut the lode, for which object eight miners and four winders are employed. The 40 fm. level is driven 49 fm. west on the level; here the lode is 3 feet wide, well-defined, but not producing copper; at this spot seven men are at work. In the end of the 30 fm. level five men are employed; they have cleared the slides, but the lode does not yet bear any work for copper; in the 30, driving east, four men are engaged at the slide and in the steps above this level, which is producing a good copper. Two miners are busy at a waste cut of engine-shaft raising copper, which is only of middling quality; three men are clearing the western adit level. From the statement made of the mine, it is evident that the operations now in progress will require to be continued for some time to put the mine in the condition to expect operations of a permanent paying mine. It must not be forgotten by all interested in this undertaking, that the opening out of this mine for copper was only partially done till the autumn of last year. We recommend as the works most requisite to be vigorously prosecuted, the 30 and 40 fm. levels, and the drift south from the 60, as well as to set away south from the 40 to the 30 men now employed on Peacock lode, which may require driving of 30 fm. Of the 30 men now employed only four at present, and occasionally eight, have been raising copper; and it is quite certain that this work must continue, in order to prosecute the mine in a profitable manner.—J. MARSHALL; R. BARKER.

From the foregoing report, which embraces the inspection of this mine both externally and internally, it is satisfactory to the committee to say that if an increase of capital of the company be made equal to the valuable resource which this mine contains, there is no doubt of its becoming a permanently paying undertaking. The committee, looking at the financial state of the mine, have ascertained that all the available resources will be absorbed by claims upon it, and by the work which is carrying on at the mine by the 1st of May; it is, therefore, the imperative duty of the committee to suggest and recommend that a call of 1s. per share should be made upon the shareholders. If the committee should not receive the support now mentioned by payment of this call, there will be only one course left to adopt—viz., that of selling the mine and its contents, and other assets of the company, and dividing the same rateably on presentation of the 41,720 shares, the only number for which the company are now responsible. This would cause an immense sacrifice of property, made at an epoch in the history of a mine when it wears the best appearance of yielding a profitable return.

A statement of accounts was next submitted, from which the following is condensed:

Dr.—Balance at bankers, &c.	£ 408 18 1
Securities	3149 13 8
Net proceeds of gold	139 10 11
II. Bath and Sons	144 17 4
Cost sheets	£ 419 11 2
Travelling expenses	35 6 10
Printing, stationery, &c.	453 17 6
Securities unavailable	1494 16 8
	£2513 13 2

Balance in favour of mine £1391 7 10

The CHAIRMAN said, in moving the adoption of the report, he had only a few words to add, as Messrs. Marshall and Barker had visited the mine, and would answer any queries upon the present position and future prospects of the adventure. The committee would receive the sanction of the shareholders, and enable them to push forward the full development of the mine with every prospect of success. The stamps would be ready in a few days, and the committee would be able to look at the work which they might carry on the working of the mine with energy.

Mr. VALLANCE entered upon certain statements contained in the report of the committee of investigation.

Mr. MARSHALL contended that that question was finally disposed of upon the last occasion, and, after a very lengthy discussion, it was decided that Mr. Vallance was out of order.

A SHAREHOLDER wished to know whether the securities given for shares to the extent of 1494 16s. were utterly worthless!

Mr. MARSHALL said that out of that amount 175s. had been paid since the last meeting, in two sums of 1000, and 75s., and the additional 25s. would be paid, so that the amount was returned to 1494 16s.

Mr. MARSHALL: To know the nature of the securities given by the defaulters? A SHAREHOLDER said their names ought to be published.

Mr. MARSHALL observed that every exertion was being made to get in the money, and as they had got in 2000, it would be better for the shareholders to look at the cost-book, in which they are entered, than publish them to the world.

A SHAREHOLDER complained that it was unfair to make a call whilst those arrears were standing. Much did they expect to raise by the 1s. call? They had only about 18,000 shareholders registered.

The CHAIRMAN said the call was attended with great difficulty, as he believed the

law would not allow them to forfeit the shares, and the unregistered shareholders could come forward and claim to share with those who had paid, but they were bound to see whether the shareholders would respond to the call; and all those who paid the 1s. per share would have an opportunity, at a future meeting, to decide what measures should be adopted, whether it was desirable to go on, or wind-up, and make a fresh company.

LORD RANELAGH said it ought to be distinctly understood by those paying the calls that the money would not be touched without the sanction of a general meeting, and, if wind-up, the money would be returned.

The CHAIRMAN suggested that the question of winding-up should be considered within a month from the present time.

Mr. MOFFATT said it was desirable they should take the advice of the chairman, by coming forward and responding to the call, which would not be spent without the sanction of another meeting.

A SHAREHOLDER said it might give confidence if it was stated how long a time it would be before the mine was in a paying position. They might not object to one or two calls of 1s., but would not like them to come every month.

The CHAIRMAN said if the shareholders referred back to the reports by Mr. Hemmley and Henwood, they were of opinion that, to fully develop the mine, 40000, or 50000, would be required; so that, taking it at the outside, a call of 2s. per share would be sufficient.

They had 50 tons of copper ore, worth from 14s. to 15s. per ton, and they hoped to get a certain quantity to diminish the expenses; at the same time, they ought to make up their minds to pay calls to the extent of 2s. per share.

Mr. BARKER had strongly advocated the call, although he did not know whether they would carry it on or not, as he would not allow his money to be spent if only 20,000 paid up; but if they had not power to forfeit the shares, they could wind it up, and carry it on under a new constitution. With regard to the mine as it now stands, the lode was well-defined, but there was a certain quantity of dead ground to drive through before they came to the lode, and money must be spent both for that purpose and in sinking; from the 40 and 60, the dead work, in his opinion, would occupy from 9 to 12 months. The appearance of the copper lode was highly favourable, and they must remember they had only been employed searching for copper from July last.

Mr. MARSHALL said the great question was, how they could practically make the mine profitable. At the last general meeting it was decided that 8250 unappropriated shares should be destroyed. If the mine was worth anything at that time, they now held a property worth 16 per cent. more, and the limitation of the number of shares was most desirable. He thought the directors had not dealt improperly with the shareholders, because it was shadowed out at the last meeting that they would have to make a call at an early period, and the course chosen was a most discreet one, as the money would be held secured until the next meeting; and if they could not get in the great body of shareholders, they would see the propriety, consistency, and fairness of winding-up the present company, and altering the constitution. He must observe that the open, frank, and undisguised course pursued by the chairman was calculated to inspire confidence in the general body of shareholders.

Mr. GOLDICHT thought they ought to know the names of the parties in arrears. He also wished to know what had become of the large pile of gossan at surface?

Mr. BARKER said it was still there, and about 100 tons might be picked out of it, although of doubtful value. He objected to publish the names of the defaulters, as energetic steps were taken to recover the money.

LORD RANELAGH said, upon previous occasions he had a very strong objection to giving up the names, but the time had arrived when forbearance ought to cease; it was now a year and a half since the names were handed in, and he should vote now for publishing them, with the exception of one, who had already paid part, and would pay the remainder.

Mr. MARSHALL objected to the names being given up, as no good purpose would be served by so doing. He would ask the solicitor what course had been pursued to recover the money?

Mr. CHORT (the solicitor) said that every legal step had been taken to recover the amounts. One of the parties, it was well known, was a bankrupt in the Scotch Court. He had not another shilling, and having become bankrupt, he could not be taken, and one or two others were incarcerated, and more could not be done.

LORD RANELAGH: As I said before, I have quite changed my opinion; when men are guilty of dishonourable transactions, as a public good, their names ought to be exposed. Those gentlemen had been applied to from day to day, but had showed no disposition to come forward.

Mr. THORNHILL reminded them that upon the last occasion it was clearly understood, that if the acceptances were not paid by the next meeting, the names should be published.

The CHAIRMAN put the question to the vote, when it was carried by a large majority, and the following announced as defaulters:—Mr. Butt, G.C. and M.P., 1000, Mr. Cook, 1000, Mr. Martin, 4000, Mr. W. W. Mansell, 3200, Mr. Green, 1000, and Mr. Duppa, 2000.

A SHAREHOLDER wished to know what cash they had in hand to carry on the mine after discharging all liabilities?—Mr. MARSHALL replied, that they estimated the funds sufficient to last to the 1st of May (Tuesday next).

The CHAIRMAN moved: "That the report and accounts be received and adopted."

Mr. MOXON seconded the resolution, which was carried unanimously.

The CHAIRMAN said, in accordance with the advertisement, he would now declare the meeting special, for the purpose of making a call. It was proposed that the call should be 1s. per share, payable on or before the 25th May next, and the committee would pledge themselves to those gentlemen who paid that the money should not be touched until after the next general meeting, when it should be decided whether they should go on or wind-up the present company, divide the assets, and re-establish it upon a new basis.

Mr. BARKER said they were in such a position that they could not go on without capital, and the committee had discussed the matter amongst themselves very fully and freely, and the course suggested by the chairman was the only one that could be adopted.

A SHAREHOLDER wished to know the probable expenditure for the ensuing three months?—Mr. MARSHALL replied that the cost-shets for May, June, and July, were estimated at 2500, per month; finishing wheel, 800; additional work, 800, per month; rent and miscellaneous expenses, 278; making a total of 1348s. He would call attention to the estimate given at the last meeting; it was then stated that from 12000, to 13000, could be required, and the whole expense had been 1334s. He, therefore, considered that the sum he had stated was all that would be required.

A SHAREHOLDER wished to know whether the copper ore at surface would not assist in paying the expenses?—Mr. MOFFATT: In May they expected to have 50 tons of rich ore, but he never calculated until it was realised. It was considered that the ore at grass was valuable.

Mr. BARKER: I calculate it at 6000.

Mr. MOXON asked whether they had any report from a miner?—The CHAIRMAN said they had not, as the report by Mr. Barker and Mr. Marshall was considered ample.

Mr. VALLANCE suggested that the time of paying the call should be extended to the 10th of June.

LORD RANELAGH thought it would make no difference, as he was of opinion they must wind up, and it would be as unfair to hurry the call as it would to hurry the sale of the mine.

Mr. BARKER also recommended extending the time.

The CHAIRMAN then moved, "That a call of 1s. per share be made, payable on or before the 9th day of June next, and that a general meeting be called for Wednesday, the 13th of June."

Mr. THORNHILL said he had great pleasure in moving that the chairman and committee be re-elected, he having the fullest confidence in their management.

The resolution being seconded, Mr. VALLANCE moved, as an amendment, that Messrs. Moffatt, Barker, Hand, Wilson, Thomas, Livingston, and Cooper, be the committee of management for the ensuing three months. He stated that by pursuing this course the whole of the expenses would be saved, as the management would be conducted in Liverpool.

Mr. LANGTON seconded the amendment, saying that he did not understand why they should recommend adding three more gentlemen from Liverpool. He was not at all anxious to remain; indeed, if they re-elected him he intended to resign: at the same time, he had done everything for the benefit of the society, and had warned them from the very commencement of his suspicions on the gold question; and in another company, in which he was chairman, through taking his advice, 10s. in the pound had been returned to the shareholders. He (Lord Ranelagh) had never dealt in insinuations, but had always stated openly his opinion; there was no mystery, robbery, and bad feeling amongst people connected with mining, that nothing on earth would induce him to belong to another company. At the last meeting he intended to resign, being disgusted with their proceedings, and now they proposed striking out the name of Mr. Marshall, the most intelligent man upon the list. The Liverpool men had not the straightforwardness to state their grievances fairly, but made insinuations. Although he felt much annoyed, he could bear testimony to the honour and good feeling which had existed amongst the directors for the last year and a half; but perhaps some allowance was to be made for these Liverpool gentlemen, who had been speculating in the shares and had lost the majority of the Liverpool people were strongly opposed to that course.—Mr. BARKER and Mr. MOFFATT confirmed that opinion.

Mr. LANGTON said, after the expression of feeling on the subject, he should withdraw from seconding the amendment.

The following resolution was then unanimously carried:—"That the chairman and committee of management be requested to continue in office the next three months."

LORD RANELAGH said he had resolved to retire, but would not shirk his duty, and would, therefore, retain his office until June, from which time he would not remain in a position to be badgered, when his motives were pure. So far as the directors were concerned, the Poltimore Company had been conducted with the greatest honour and integrity.

Mr. CHORT was then unanimously re-elected secretary and purser.

Mr. DOWLING said, to put the question beyond doubt as to the expenditure of the call, he would propose the following resolution:—"That the money to be received upon the call shall not be disposed of until after the next meeting."

The resolution was seconded and carried unanimously, and a cordial vote of thanks to the chairman terminated the proceedings.

PORT ROYAL AND ST. ANDREW'S COPPER MINING COMPANY OF JAMAICA.

An extraordinary general meeting of shareholders was held at the offices of the company, 44, Lombard-street, on Thursday, for the purpose of amending certain clauses of the Deed of Settlement, for reducing the qualification of a director from 500 to 100 shares, increasing the number of directors fixed by the deed, and electing two additional directors.

Mr. W. GLADSTONE in the chair.

Mr. JOHN H. KOCH (the secretary) read the advertisement convening the meeting from the Mining Journal.

The CHAIRMAN stated that this meeting was called in consequence of what took place at the last meeting, at the London Tavern, when it was considered that the company was hardly represented by the board of directors managing at that time. The comparatively few who held 500 shares made it difficult for the directors or their friends to find men so qualified who were inclined to act. They had found Mr. Barry and Major Way, who were fully qualified for directors, provided that the amendment proposed was carried, and the directors recommended them for election. He then moved the following resolutions, which were carried unanimously:—

That the 19th clause of the Deed of Settlement be amended, by omitting the words "500 shares, and inserting in lieu thereof 100 shares.—That the number of directors,

fixed by the deed at four, be varied, and be in future five.—That Major Gregory Lewis Way be, and is hereby, appointed a director of this company.—That John David Barry, Esq., be, and is hereby, appointed a director of this company.—That this meeting, in exercise of the power given by the 13th clause of the Deed of Settlement, binds the company and every shareholder thereof to the resolutions passed this day.

The CHAIRMAN then observed that they had transacted the business of the day, and a vote of thanks having been given to, and acknowledged by him, the meeting separated.

SORTIDGE CONSOLS MINING COMPANY.

A general meeting of shareholders was held at the offices, Winchester-buildings, on Thursday, Mr. HILL in the chair.

The notice convening the meeting having been read, the CHAIRMAN expressed his regret at the absence of Mr. Thomas, the chairman of the committee; but he was happy to say that his task was an easy one, as their financial statement was most satisfactory, and the present position and prospects of the mine highly encouraging.

He further informed the meeting, that a most favourable opportunity having offered for obtaining from Lord Fortescue a lease of a piece of ground to the east of their mine, into which their lodes dipped, they had availed themselves of it, and secured the purchase for the comparatively small sum of 2000. From the smallness of the amount, they had not considered it necessary to wait the sanction of the shareholders, as the committee thought the value of the ground exonerated them for the steps they had taken. There was nearly 30000, in hand after providing for May, and nothing to pay until June next; and the mine was now paying current costs.

Mr. JOSEPH explained that the next month's cost-sheet would be heavier, on account of timber to be employed in the erection of the engine-house; and the month after heavier still, as the balances on that account would have to be paid. Altogether, the engine-house would probably cost about 3000; but he was happy to inform them that, during the next three months, the samplings will increase in value, though the working costs will not increase in proportionate amount.

The SECRETARY then read the following report, from Capt. Metherell:—

April 25.—In handing you my report for the meeting to-morrow, I beg to say that the eastern engine-shaft is sunk 11 fms. under the 30 fm. level, and the lode has been cut into, which is about 5½ feet wide, so far as seen. We cannot as yet see any north wall, but the lode may certainly be said to be worth 30s. per fm.; and I believe still we shall have more ore on the foot or north wall when reached, which will be proved next week. The eastern end in the 30 fm. level has been extended from the engine-shaft about 32 fms. 21 fms. of which extent is worth, on an average, 5 tons per fm. of rich ore, worth 12s. per ton, and the lode in the present end is worth 4½ tons per fm. of good quality ore. A winze is now sinking in the bottom of the 30 fm. level, which will yield for its length (9 feet) 12 tons per fm., worth at least 10s. per ton. In the western end in the same level, a cross-cut has been holed to Hitchins's engine-shaft, and the level has been extended west of the said cross-cut 10 fms. The lode in this driving is composed of very promising gossan, but so far shows but little ore. I recommend this end to be stopped, that the 40 fm. level may be brought in under this gossan, which will be proved in a short time, and the result of which, no doubt, will be very satisfactory. The pitches in the back of the 30 fm. level are turning out good quality work. Hitchins's engine-shaft is sunk 7 fms. under the 30 fm. level, and we are preparing to put in a new plunger-lift. The new engine-house is up and covered in, and I hope to commence getting on with the engine-work on Monday next. Our next sampling will be on Friday, the 27th inst., and will be from 50 to 60 tons. Finally, I do not hesitate to say that, when we have the aid of a crusher, and our levels are more fully extended, we shall be enabled to sample 140 to 150 tons a month of good quality ore, and with the best chances of increasing the samplings.—JAMES METHERELL.

The following statement of accounts was submitted:—

Balance last account	£175 0 7
Calls	3000 0 0
Less ore sold	1307 16 0
Discounts	2 2 = £4508 19 5
Labour cost (three months)	£1492 18 1
Lord's dues	8 2 10
Discount on carriage	3 16 8 = 1380 17 7
Balance in hand	£2928 1 10

The only liability was the dues above named, which were not yet payable; and in addition to the above balance, there was an amount due for ore sold, not yet received, estimated at 524s. 14s.

Capt. Metherell being present, was asked by Mr. MUNDAY, a large shareholder, if he was ever in the habit of jobbing in shares? or forwarding information to parties in London, enabling them to take advantage of the market? or if his name had ever appeared in the cost-sheet of the company?

Capt. Metherell completely vindicated himself from these charges. He acknowledged that a shareholder had suggested that he should forward information, for the advantage of individuals, but he had indignantly repulsed him, and turned his back upon him. There were parties in Tavistock (he believed them to be shareholders) who were at the mine sometimes twice a day, and were anxious for information of anything new, but he did not encourage them.

Mr. MUNDAY was so satisfied with the straightforward answers of Capt. Metherell, that he exonerated him from any participation in the underhand schemes which had been attributed to him. His name had been vitiated in private and in public, and the true value of the shares had been, in consequence, very much depreciated. Capt. Metherell devoted his whole time to their interests for 8s. 6s. per month, and he moved that the committee be requested to take the subject into consideration, with a view to an increase of salary.—The motion was seconded, and carried unanimously.

The accounts were adopted; the purchase of the land from Lord Fortescue was confirmed; and the committee, consisting of Messrs. Thomas, Hill, Barnett, and James, were re-appointed.

Thanks were passed to the chairman and committee; and to Mr. Joseph, for the lucid manner in which the accounts were kept; and to Capt. Metherell, for his impartial conduct, and exertions for the interests of the shareholders.—The meeting then separated.

BRITISH AUSTRALIAN GOLD COMPANY.

A meeting of shareholders was held at the London Tavern, Bishopsgate-street, on Thursday, Mr. PRINSEP in the chair.

The SECRETARY read the notice convening the meeting, and the following report of the directors:—

Your committee of management regret extremely that they have the unpleasant task of conveying to you intelligence from Hendon of the most disappointing character, and this task is all the more painful, because of its violent contrast with the hopeful nature of their address on the last occasion of meeting you. Our despatches were then up to the middle of Nov. 1854, when Mr. Dyer, notwithstanding the accident to the machinery, which had obliged him to seek for a new casting at Melbourne, expressed his perfect confidence in the success of his experiment, forwarding, indeed, the estimate of returns, which we then laid before you. These sanguine views of Mr. Dyer were then, and have since been, supported strongly by the opinions of gentlemen who had been the spot, and who still confidently believe that a very profitable yield may be extracted from those deserted diggings, and the adjacent deposits. By the last mail, however, we have received despatches from both Mr. Dyer and our controller, Mr. James Little, advising that the works had been suspended from want of funds, with a heavy arrears due to the labourers and assistants, who were seeking to obtain a judgment and execution against your property, lent to Mr. Dyer for this experiment. The issue of this legal process against him is still unknown to us, but we have no doubt that Mr. Little will have to sue for the property of the company from the consequences of Mr. Dyer's imprudence, in thus running himself into debt. The limit of his credit from hence was clearly defined, and he knew that he ought not to have expected any further advances from this company; he cannot, therefore, be exonerated from the imputation of pushing on the work so far beyond his means, even under the sanguine notion that he doubtless entertained of soon realising a sufficient quantity of gold to make up the arrears. It is the more disappointing to find that even now his experiment remains altogether unproved, for the accident to the machinery, which was his first serious interruption, occurred when he had water, and means to have operations on the stuff around him. The next chief cause of his stopping was that an excessive drought and unusually heated atmosphere, both from sun and surrounding forest fires, had evaporated the water in his reservoirs, and converted it into a thick mud, quite unfit to be employed either in his steam-engine or his washing tubs. It is apparent by the daily Journal he has supplied that his difficulties have been greater than he expected, and your committee must do him the justice to say that there appears to have been no want of energy or exertion on his part to overcome them, but that he had underrated the expense and difficulty of executing the task he had undertaken. On two occasions only do we find that he extracted gold in fair quantities from the stuff he had operated upon, but this result should have been found two or three times a day, to have been satisfactory. That there is the precious metal in the very soil around him, we have every reason to believe, but in what proportion to the ton, or to the labour employed, his proceedings have not developed, and the problem remains unsolved. By Mr. Dyer's latest advice, of the 25th January, written in haste at the last moment of the mail's dispatch, he mentions an offer made to him to crush quartz at 6s. per ton by the engine and the balls, which answer very perfectly for that purpose, as may be seen by the specimen sent to us with these despatches. He thinks that, with Mr. Little's help, he may be able, with this kind of engagement, to keep his machinery employed profitably until our instructions can reach him, and so, at any rate, to save the stock, which he values on the spot at 14000; but as we have no advice of so late a date from Mr. Little, your committee cannot say how far this object may have been carried out. In this uncertainty

directors now asked for the advice of the shareholders, as to what course should be pursued; the same amount, within a trifle, being in hand as at the last meeting. In justice to Mr. Dyer, he would state that the comptroller, Mr. Little, had visited the spot, and examined the accounts, which he found correct, with the exception of a want of economy in going back and forth, but that only amounted to about 331. They would remember, that the second day the machinery, purchased of Messrs. Medwin and Hall, was erected it broke down from a flaw in the main wheel, which compelled him to go to Melbourne to have another cast. In the mean time Mr. Dyer employed the men upon other work, and from his daily report there was no doubt he had buoyed himself up with the idea of immediate success. The only fault he had to find with Mr. Dyer was not giving full information of his position; as, in November he stated he had sufficient to carry on operations, expecting that one week's work would more than pay his arrears. Mr. Dyer borrowed the machinery, and 2000l., and he (the chairman) could not understand how they could obtain a judgment and seize the machinery. However, the directors now came before the shareholders to ask them for advice as to how they should proceed. There were three propositions to be considered; the first was, whether they should send out the gentleman who offered his services at the last meeting, and was now in attendance and willing to go; the second was to await the arrival of the next mail, to know their position with regard to the machinery; and the third was to wind-up and divide the assets. The committee scarcely knew what course to recommend, but would throw themselves upon the shareholders for their advice and guidance, under the extreme difficulties in which they were placed.

Mr. GUEBALLE said, according to private advices he had received, the failure was attributed to Mr. Dyer getting into debt, and giving the workmen 100 l. for their wages, payable three months.

Mr. RUDING wished to know to what amount Mr. Dyer had appropriated the funds to the payment of his private debts?—Mr. GUEBALLE replied, according to his advices to the extent of 8000 l. or 9000 l.

The CHAIRMAN assured the meeting that that information was incorrect; the money was sent from Sydney by Dr. Colquhoun, and before it arrived Mr. Dyer borrowed money of his friends to proceed at once to the spot; and Mr. Little, who had the control of the expenditure, had examined the accounts, and found them strictly correct, with the exception of a few trifling extravagancies. He did not believe the slightest charge could be brought against the integrity of Mr. Dyer, but he had exhibited a want of judgment.

Mr. GUEBALLE said, if they wound up they would only receive a trifle, and the gold question had never yet been properly proved.

The CHAIRMAN considered Mr. Dyer's failure was to be attributed to his meeting with greater difficulties than he expected. On the 7th of November the machine was started, and on the 8th the main wheel broke, thus destroying, no doubt, the hopes that Mr. Dyer had, that the returns would relieve him from the debts he had incurred. He did not believe, 1000 l. out of the 2000 l. entrusted to Mr. Dyer had been appropriated extravagantly.

Mr. GREEN wished to know from the solicitor to the company whether the shareholders would be liable for any debts beyond the amount now in hand?

Mr. CHAPPELL said under no circumstances would the shareholders be liable for anything, for this simple reason—they did not know who they were: parties might hold 1000 shares to-day, and none to-morrow. Whatever liability might be incurred, the directors were alone responsible.

The CHAIRMAN said, there was no doubt, if they exceeded the amount at their command, the directors would be liable for any debt beyond it. He would now propose that the report be received and adopted.

Mr. GUEBALLE seconded the resolution, and observed that the directors had given a most straightforward account of their proceedings, and the exact position of their affairs.—The resolution was unanimously carried.

A SHAREHOLDER said, he considered it the duty of the committee to carry out Mr. Dyer's proposition before they went to any further expense with Mr. Michel, as, under present circumstances, they ought not to expend money in new experiments.

Mr. GUEBALLE said, he had no confidence in Mr. Dyer.

The CHAIRMAN thought, in fairness to Mr. Dyer, the machinery ought to be tested.

Mr. WOODWORTH said, he would move the following resolution:—"That if it should hereafter appear that the machinery in Melbourne is still available, the committee be requested to take such steps as they may deem advisable to carry out Mr. Dyer's experiment, under such auspices as they may think fit."

Mr. RUDING seconded the resolution.

Mr. GUEBALLE said, Mr. Green had elicited a most important fact—that the shareholders could not lose more than the amount of their shares. He represented a large body of shareholders, who had given him their proxies, and instructed him to support making further efforts, in preference to winding-up. From what he had heard, he had no confidence in Mr. Dyer, and should, therefore, recommend sending out Mr. Michel, or any other party whom the directors might think fit.

Mr. HENEGAN said, the directors left it wholly in the hands of the shareholders.

Mr. GUEBALLE said, by way of amendment to the resolution, he would propose—"It appearing to this meeting that the company's machinery at Bendigo had not yet been properly tested, owing to the indiscretion of Mr. Dyer, and other unforeseen casualties—Resolved, that the committee be authorized to supercede Mr. Dyer's appointment, and to make immediate arrangement with Mr. Michel, or any other competent party, on terms mutually beneficial.—Mr. MOXON seconded the amendment."

Mr. MICHEL having addressed the meeting at some length, detailing his plan, which has already appeared in the *Mining Journal*, the amendment was carried, with two dissentients.

The CHAIRMAN said, the brother of the Lord Chief Justice of Melbourne was in attendance, who, he believed, would give them some interesting details of the probability of success in the colony.

Mr. G. M. STREETER, vice-president of the Geological Society of Victoria, and F. G. S. of London, said the latter honor was conferred upon him in consequence of bringing over the first specimens of crystallized gold from the colonies. He had also brought over precious stones, and he believed the colonies would be distinguished as much for jewels as gold, having in his possession some valuable stones, brought to him by a humble miner. He fully concurred with the chairman, that the operations had not been fairly tested, and it was from want of system they did not succeed. Gold mining could not be carried out successfully except by companies, as private individuals would take a claim, dig a round hole, and leave, and the remainder to prevent its falling in and crushing them; although it might be in the richest district, it must be, therefore, apparent that they left more than they took away, and to prove it, Mr. Kinnear, whom he considered a most eminent metallurgist, and two other scientific gentlemen, experimented upon some of the debris left by the miners, and obtained more gold than they did. It was evident to all the colonists that there must be a combination of labour, mechanical contrivances, and chemical skill; but he stated, with unfeigned regret, that enormous sums of money had been wasted in theory. He believed Mr. Dyer's intentions were long ago, but the mishaps that had occurred to him were enough to confound the wisest and best man, and the greatest mistake he had made, was not employing Mr. Kinnear, as he believed, at the present time, they ought to have been paying large dividends.

(Mr. Stephen, in the course of his address, produced samples of sand, containing gold visible to the naked eye, which had been left by the diggers.)

The CHAIRMAN said, if Mr. Stephen would allow him, he would take his opinion as to future operations.

Mr. STREETER said, he was quite willing to give any advice, and, as he expected shortly to return to the colony, he had no objection to control their operations, in the hope of preventing a wasteful expenditure; at the same time, he did not want to take any of their money. (Cheers.)

The proceedings then terminated with votes of thanks to Mr. Stephen, and to the chairman.

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—The lode in Field's engine-shaft, sinking below the 130 fms. level, is just as reported last week—viz., worth for copper ore 200 l. per fm. I believe the north and south parts of the lode in the 130 fms. level, east of this shaft, are united, and is now worth for copper ore from 300 l. to 600 l. per fm., and apparently improving. The lode in No. 2 winze, sinking below the 120 fms. level, east of this shaft, is worth for copper ore 300 l. per fm., and, no doubt, will soon improve, and equal the lode in the 130 fms. level. The lode in the 120 fms. level, east of this shaft, is just as reported last. The lode in the 80 fms. level, east of the flookan, is from 1 ft. to 15 in. wide, and having a promising appearance, containing a small quantity of copper ore, but not of sufficient quantity to value. All the other parts of the mine are just as last reported.—W. WHITE: April 23.

ALTARNUN CONSOLS.—The circular came safe to hand, and we have suspended operations both in the shaft and in the stopes. It is a great pity that we are not allowed to sink the engine-shaft a few fathoms deeper; the ground is much easier for sinking, and the lode still going larger, and of a very different nature from what it has been; and I believe we shall not sink far before we shall have a large lode again. We must not expect a very productive lode for copper before we have sunk through the different layers, and set down in a more settled stratum; then the lode will be settled, and productive, if at all so. To prove the lode, we must go deeper; as it is, it is a promising lode untried. We can get 2 tons of tin ready for the market by the time I stated in my report of the 10th inst. We have about 200 sacks of work to haul up, spall, and stamp, besides a quantity now at the surface. I believe, when we have stamped and cleaned it all up, we shall have 2½ tons of tin; this we shall do as quickly as possible. We have also several fathoms of ground to secure in the bottom of the 10 fms. level, where we have been stopping; it is just under the boiler-house. If the water should be left in, and this not done, we are in danger of running down our boiler-house and engine-house. We shall make the ground firm before we stop the engine.—B. REYNOLDS: W. NORTHAM: April 23.

BEDFORD UNITED.—There is no alteration in the 130 fms. level in the past week. In the 115 fms. level east the lode is 4 feet wide, worth full 6 tons of good ore per fm. We are driving by the side of the lode in this level west; the stopes in the back of this level are worth 7 tons of ore per fathom. In the 103 fms. level east the lode is 3 feet wide, good saving work. Jackson's stopes, in this level, are still worth 6 tons of ore per fathom. No lode taken down in the 80 or 90 fms. levels. We have a very promising lode in the 35 fms. level east; it is about 2 feet wide, composed of fine gossan, quartz, and stones of black and grey ore.—J. PHILLIPS: April 23.

BOLENOWE.—In the 20 fms. level west the lode continues 1½ ft. wide, with occasional stones of grey and black ore.—W. ROBERTS: April 21.

BORINGDON CONSOLS.—The shaftmen have resumed the sinking of Annie's shaft below the 36 fms. plat. The lode in the 24 fms. level is improving, and easier for driving; the eastern stopes in the back of the above level has improved very much within the past week, and from the wall we are breaking good work. All other parts of the mine are much the same as in my last. We have sent samples of our two last parcels of lead to the purchasers—No. 1, computed 9 tons; No. 2, computed 32 tons.—W. GOSNOLD: April 23.

BOTTLE HILL.—The cross-cut in the 123 is much the same as last reported. In the 113 east the lode is 4 feet wide, producing saving work; the stopes in the back of this level are producing good stamp work. In driving west on the south lode, in the 100, the lode is 12 in. wide, composed of mauls, spar, and capel, and yielding good stones of copper ore. There is no alteration in any other part of the mine to notice.—J. GIRONNO: April 24.

BUTTERDON.—The engine-shaft is sunk 9 fms. 2 ft. below the 30 fms. level, where the eastern part of the lode is 5 in. wide, composed of can, interspersed with lead; the western part has not been taken down since last week.—W. BENTLEY: April 24.

CAE-GYNNON.—We have cut through the lode in the 20 fms. level east, of engine-shaft, which is 6 ft. wide, composed of blende, with a little lead ore. The men have finished casing and dividing the shaft, and are now driving the 20 west, where the lode is 7 feet wide, composed of lead ore, spar, and some blende—a very promising lode. The winze sinking under the 10 fms. level, 10 fms. west of the engine-shaft, is pro-

ducing good lead, and the men making fair progress. The stopes much as usual—yielding 10 cwts. per fm.—E. STEDMAN: April 23.

CAMBORNE CONSOLS.—In the 33 fms. level west, on the counter, the lode produces ½ a ton of ore per fm. The 20 driving west, and the 10 east, are each producing good stones of yellow ore.—W. ROBERTS: April 21.

CAMDWR MAWE.—But little alteration has taken place since my last report. The stopes in the 5 is improving. The cross-cut in the 12 is much the same. I have been disappointed in completing the quantity of ore dressed, on account of a portion of the lead having fallen in, and consequently being very short of water for a few days. I hope to fulfil my promise before the expiration of the ensuing week.—J. WILLIAMS.

CARREG-JHOVA (Llanymynech).—In the lower level, driving south-west, the lode is 4 ft. wide, with good copper in the forebreast; the lead has taken its fall lower down to another bed, so now the men are raising both copper and lead on this lode. The other set of men are raising most excellent copper in the higher level, driving south-west; this lode is 2 ft. wide, of solid copper, clean from gossan. In the higher level, driving north-east, the men came to soft ground of gossan, so this week I shifted them to the north-east lode in the lower level, where we have been clearing the deads from the fore-breast of the lode, and exploring. I am glad to inform you since they began working on this lode they are getting good green copper, which pays well for its working. In both ends of the mine there is most excellent copper ore. The new set of men (copper miners) are raising the copper neat and clean. A boat load of copper ore will be ready for market the beginning of next week.—JOHN LESTER: April 25.

CARVANNALL.—At the engine-shaft, sinking under the 106 fms. level, the lode is 3 ft. wide, composed of mauls and iron, with small bunches of black ore. The lode in the 30 fms. level, east of the engine-shaft, is 1½ ft. wide, producing good stones of grey ore. The tribute pitches continue to look tolerably well.—W. ROBERTS: April 21.

CEFN CWM BRWYN.—The lode in the deep adit level east has not been taken down for the last three weeks, but from all appearance it is quite as good as at that point where it yielded about 12 cwts. of ore per fm.; the lode in the 38 fathom level, west of Taylor's shaft, is 5 ft. wide, producing 1 ton 10 cwts. of ore per fathom. The stopes over this level, 40 fms. west of shaft, is yielding about 1 ton 10 cwts. of ore per fathom. The stopes over this level, 10 fms. from shaft, produces about 15 cwts. of ore per fm. In the 38 fms. level, west of winze, 70 fms. west of Taylor's shaft, the lode is 4 ft. wide, producing about 10 cwts. of ore per fm. The lode in the stopes over the 24 fms. level, 45 fms. west of Taylor's shaft, is 7 ft. wide, producing about 15 cwts. of ore per fm. The stopes over this level, 30 fms. west of shaft, is yielding about 18 cwts. of ore per fm. The stopes over this level, 20 fms. west of shaft, is yielding about 1 ton per fm. The lode in the stopes in the bottom of the 12 fms. level, 15 fms. east of Taylor's shaft, is 4 ft. wide, yielding 1 ton 10 cwts. of ore per fm. The water is now in fork in the 50, and we have commenced driving the cross-cut south to intersect the lode, where we have about 9 ft. or 2 fathoms to drive to reach the lode. The dressing, &c., goes on regularly.—April 24.

CLARA.—The 20 is extended on the course of the lode from the cross-cut about 11 fms., averaging in width for the last 3 fms. from 5 to 6 ft., composed principally of light blue slate, with a strong mixture of quartz, blende, and lead ore, yielding of the latter about 15 cwts. to the fathom; there is a quantity of water coming out of the present end, which is causing the water in the old bottoms to go down very fast; the old bottoms will be drained dry, when a communication will be effected to the 30. In this part of old mine there is a quantity of ore ground standing, and when last reported on would yield 1 ton of ore per fm. We have nearly completed our ore floors, and shall commence dressing in a day or two.—S. TRIVETTIAN: April 23.

CLLJAH AND WENTWORTH.—Julia Lode: The 20, driving east of Walter's engine-shaft, is extended about 42 fms., the lode producing good stones of ore. The winze sinking below the 20, east of engine-shaft, is sunk about 4 fms., the lode worth 10 l. per fm. The 30, driving east of Walter's engine-shaft, is driven about 30 fms., the lode worth 7 l. per fathom. The winze sinking below the 30, east of the engine-shaft, is sunk about 4 fms., the lode worth 10 l. per fathom. The cross-cut south from the 30, in the 30 fms. level, is 3 fms. from the appearance of the ground, we are led to believe we are not far from Wentworth lode. The 40, driving east of Walter's engine-shaft, is driven about 3 fms., the lode worth 7 l. per fm. The 40, driving west from said shaft, is extended about 4 fms., the lode producing 2 tons of ore per fm.—Mary Ann Lode: The 16, driving east of old engine-shaft, is extended 63 fms., the lode producing good stones of ore.—J. CUDLIP: C. GLASSON: April 21.

CWM DARREN.—In the engine-shaft, sinking below the 30, the lode underlies much faster than usual; the part being carried is about 2 ft. wide, in which there is a good branch of lead and one of copper ore; the ground gets harder as we go down, which seems to agree with the lode. We have set the 30 to drive west on the north part of the lode. In the stopes in back of the said level, west of Morgan's winze, the lode is 1½ ft. wide, worth 7 l. per fathom. The 40, driving east of the Willow Bar Mine, not having any instructions, I shall be glad to know whether you intend driving the 30 east towards the old shaft, as the men are waiting.—A. WATERS: April 23.

CWMDYLE.—The stopes working at No. 6 level is not quite so productive as when last reported on, the east end being rather disordered. I have put on a pair to stop at No. 2 stopes, in Pascoe's level. The pier of the railway at No. 5 have fallen down this week, which was occasioned by the thaw after being frozen up for five months; consequently no ore has been got down from the higher levels, but we have it all repaired now, and hope to get off another cargo in ten days.—T. COLLIVER: April 21.

CWM ERFIN.—The 45 fms. level is not extended about 17 fms. east of the drawing shaft; the lode in the present end at this point is 3 ft. wide, with a promising appearance, now yielding 1 ton of ore per fm. The lode in the stopes over this level, west of the drawing shaft, is from 4 to 5 ft. wide, and will produce 1 ton of ore per fathom. The stopes over this level, west of the drawing shaft, will produce 1 ton 5 cwts. of ore per fm. At the stopes over ditto, 15 fathoms west of ditto, the lode is large, and will yield 15 cwts. of ore per fm. The lode in the winze sinking below the 32 fms. level, east of the drawing shaft, is 3 ft. wide, producing stones of ore at times; this winze is now down about 3 fms. 3 ft. below the 32 fms. level. The 45 fms. level west is now communicated to the same level, east of the engine-shaft. The raising of ore for this month will be about 26 tons, with thirty men. The water is now drained out of the mine to the depth of 7 fathoms below the 45 fms. level, and is forking rather, the drawing, &c., and all other things connected with our proceedings there, are all going on regular.—April 24.

DEVON AND COURTENAY.—The lode in the 90 fms. level west is about 3 ft. wide, spotted throughout with copper ore. The lode on counter, in this level, will turn out 2 tons of good ore per fm. The lode in the 80 west is about 3½ ft. wide, and spotted throughout with copper ore.—T. BAWDEN: April 23.

DEVON BULLER.—We are getting on with all speed with the engine; the bob and cylinder are fixed, and all other work is progressing satisfactorily.—W. NEILL.

DHURODE.—The winze under the deep adit continues improving in sinking. The cross-course, driving south, is still making a great deal of water, and the ground for several fathoms is impregnated with copper. We are in hopes of soon cutting something good. The ground in the other parts of the mine has an equally satisfactory appearance. At the East Mine, the ground at the shaft is gradually improving in sinking, and yielding splendid stones of copper, also silver-lead in the quartz. The dressing on the floors is proceeding rapidly, and we have begun to dress the piles of slimes that have been for so long a time accumulating on the north floors. For the last fortnight we have been continuing dry weather; the stamps not all working regularly, to save the water for dressing.—W. TOKKIN: April 23.

DUNSELY WHEEL PHOENIX.—Since the water question has been settled with the Mark Valley Company, we have again resumed stopping in the back of east adit, on the Velvet Doublet lode, by a full part of men; we have also erected some of our dressing plant, some of which is at work. We hope in a few days to finish the whole of our dressing machinery, so as to resume washing our tin.—J. SPARRO: April 24.

EAGLEBROOK.—The 10 fms. level, west of engine-shaft, is extended 5 fms. 4 ft.; the lode in the end continues much the same as when I last wrote you, producing from 12 to 15 cwts. of lead ore per fm. The 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below the 10 fms. level; the men are sinking about 10 fms. in the 10 fms. level, and the 10, east of ditto, is extended 5 fms. 3 ft.; the lode in this end is 10 ft. wide, composed of soft spar and carbonate of lime, with occasional good stones of lead ore; the end is letting out much water. We commenced on Friday last to sink our engine-shaft below

METAL MARKET, London, April 27, 1855.

At the Penquene Slate Quarries meeting, on the 20th inst. (Mr. J. Hopkins in the chair), the accounts showed—Balance last account, 1025s. 6s. 5d.; labour cost, six months, to April 1854, 1301s. 13s. 6d.; balance carried over, 13s. 11d.; sundries, 184s. 7d. 7c.; leaving balance against the company, 520s. 10s. 5d. The amount of liabilities over assets was 738s. 2s. 6d. A call of 5s. per share was made. Mr. Joseph Ashworth, manager, reported favourably of the progress of the works.

At the Althorpe Consols Slate Quarry Company meeting, yesterday (Mr. Howard in the chair), much business was transacted, which resulted in the adjournment of the meeting, until a committee of investigation, then appointed, should have examined into the accounts and affairs of the company from the commencement, and an inspection of the quarry should have been made. It is expected that Mr. Dickson, of Bangor, would undertake this inspection.

The Barytes Company of Ireland have convened the quarterly meeting of shareholders for Wednesday, the 24th May, at Walbrook House, City.

Wheal Whitelegg, East Wheel Rose, Cwm Erfin, Cefn Brynno, Fron-goch, Pantymwyn, Penrynblas, Westminster, Maeswain, Belgraves, Ty-Maen, Brynford Hall, and Minera, have sold lead ore.

East Wheel Margaret, Great Polgoth, Wheal Marshall, and East Wheel Vor, have sold black tin.

The Grassington Mines sold 150 tons of pig-lead this week.

The Great Polgoth Mine sold 10 tons 6 cwt. 3 qrs. 17 lbs. of black tin on the 19th inst. to Messrs. L. C. and W. Daubuz.

The Holmbush Mine sold on Thursday, the 19th inst., 279 tons of copper ore, of the value of 1475s. 6s. 6d.

Wheal Marshall (St. Stephens) has sold black tin.

St. Austell Consols monthly parcel of nickel and cobalt ores, sold on the 16th inst., produced 374s. 10s.

West Basset sampled 645 tons, and North Basset 307 tons of copper ore, this week.

At Tincroft, in the 120 fm. level, driving west of Downright shaft, the lode is worth from 35s. to 80s. per fathom.

At Mendip Hills, the operations are at present confined to dressing and smelting the slags and slimes, of which there are vast quantities, sufficient to last many years, without exhausting the immense heaps of stuff visible; and the operations and prospects are likely to be attended with much more success than hitherto, several improvements having taken place in the dressing and smelting, whereby a great saving is effected, with increased produce. The old workings of these enormous deposits of lead having been, in all probability, before the invention of the steam-engine to facilitate their sinking, or the use of powder for blasting, they could not have got to any considerable depth; therefore, there appears to be a splendid chance, if a shaft were sunk through the debris to the bottom of the old mine, that an immense deposit of lead will be found in the bottom, and which the ancient miners had no means of getting at.

At Vale of Towy, great improvements are taking place. They have now a good course of ore at the engine-shaft.

At Bryntal Mine, in costuming they have found the lode in the eastern part of the set, 18 ft. wide, producing blue clay, sulphate of barytes, carbonate of lime, and small lumps of lead ore, and presenting every appearance of a productive lode. It is expected the unexplored country in this mine will produce good results. The lode in the 10 fm. level is 1½ ft. wide, producing splendid ore, and a further small discovery would enable them to work to a profit; it requires no timber, and works at low cost. A parcel of ore is to be shipped on Monday morning.

The Lackmore Mine has been visited by Mr. John Taylor, who expresses a favourable opinion of the property, but was greatly disappointed at the dilapidated state of the machinery and buildings, and the little progress made with the workings. Mr. Taylor recommends that a meeting of shareholders should be convened, when the accounts to the 30th June are closed, to decide upon the measures necessary for the further prosecution of the mine.

East Wheel Margaret has very much improved—in fact, we are informed, never looked so well as at present.

The Great Cambrian Company have had the call recently made very well responded to.

During the week, shares have changed hands in the following:—

DIVIDED MINES.—Alfred Consols, Bedford United, Comford, Condurrow, Devon Great Consols, East Pool, Gonnams, Mendip Hills, North Wheel Basset, Rosewarne United, Welsh Trough, Wheal Arthur, Wheal Cliffo, Wheal Bulver, Wheal Golden, Wheal Exmouth, Wheal Adams United, Wheal Lough, Wheal Wreay, Lackmore, Mining Company of Ireland.

MINES WHICH HAVE SOLD ORE.—Bolling Well, Boscan, Brynford Hall, Budnik Consols, Bwlch, Cae-Gwyn, Calatock Consols, Camborne Consols, Carnyorth, Carvannall, Cliffland and Wentworth, Cradock Moor, Dyfnwrm, Eaglebrook, East Tamar, East Wheel Rose, East Wheel Vor, Gilmar, Great Wheel Alfred, Great Wheel Badern, Horward United, Messor, North Towy, Okel Tor, Rhosydol, Vale of Towy, Sortridge Consols, Wheel Crebwr, West Rosewarne, Wheel Kitty, Wheel Teldy.

MINES WHICH HAVE SOLD ORE.—Buller and Boscan, East Boscan, East Carnon, Great Sortridge, South Devon Consols, South Bailer and West Penarthall, Ludcott.

In Foreign Mines, the market continues firm, and National Brazilian shares have fully maintained the recent advance; during the week business has been done at 2½, and yesterday changed hands at 2½. Copiapo has also improved, transactions having been done at 2½. The market for the United Mexican shares continues to occupy the attention of speculators, and a considerable amount of business was done yesterday at 7½, 7½, to 7½. The closing price of Imperial Brazilian was 2½ to 3; St. John del Rey, 31 to 33; Cobre Copper, 35 to 35; Clarendon of Jamaica, 1½ to 1½; Luvianian, 1½ to 1½; Pontigaud Silver-Lead, 14½ to 15½.

At the Port Royal and St. Andrew's Copper Mining Company (of Jamaica) meeting, on Thursday (Mr. W. Gladstone in the chair), it was resolved to alter the clause relating to the number of shares qualifying the holder for a director from 500 to 100 shares, to alter the number of directors from four to five, and to elect Mr. John David Barry and Major Gregory Lewis Way as directors of the company.

At the British Australian Gold Company meeting, on Thursday (Mr. Prinsep in the chair), the report of the directors was read and adopted. The chairman stated that there were three courses to pursue—first, to carry out Mr. Dyer's experiment; secondly, to adopt Mr. Michel's proposition; or thirdly, to wind up the company, and divide the assets. The second proposition, with the addition of Mr. Michel, or any other competent party, was adopted, and the directors were not a single shareholder in attendance was in favour of winding-up. The proceedings are fully reported in another column.

The Linares Mining Company have advices, dated Pozo Ancho, April 16th:—"The engine-shaft is to the depth of 85 fm. level, and the sunpump are now engaged cutting through the lode, which thus far is pure. The 75 end west is in advance of the engine-shaft 67 yards 2 feet; lode poor. The 65 end is driven west of Romero's winze 13 yards; this end continues hard and poor, but, from the fine lode gone down in Don Carlos winze before this end, we anticipate an improvement shortly. In the cross-cut, driving north at this point to communicate with San Juan shaft, there is nothing new to notice; ground still hard for driving.

Lopez winze is sunk below this level 5 fms. 1 foot 6 inches; the lode continues good, worth 4 tons of ore per fm. The 5 fm. level, west of New San Francisco, on the north lode, continues poor. East of engine-shaft, the 75 end is east of Buendias winze 29 yards 2 feet, worth 1½ tons per fm. The 65 end is in advance of Cortez winze 24 yards; lode large, producing stones of ore, but not to value. Manuel's winze is sunk below this level 5 fms. worth 2 tons of ore per fm. At Thorne's shaft, the 55 fm. level is in advance of Esteban's winze 4 yards 1 foot; lode large, worth 3 tons of ore per fm. The side lode, west of Rodriguez winze, in this level, is worth 1½ tons per fm. The 55 end, on the north lode at this shaft, east of cross-cut, continues large, from 12 fms. west, but at present not so good as last report; worth 4 tons of ore per fm. The 45 end, on the north lode, is in advance of Galeo's winze 1 ton of ore per fm. The 45 end, on the north lode, is in advance of Galeo's winze 15 yards 1 foot; the lode continues good, worth 4 tons per fm. Gasa winze on this lode is below the level 3 yards, worth 2½ tons per fm. The end west on this lode is from the cross-cut 23 yards 1 foot, worth 1½ tons per fm. The 45 end, on middle lode, is in advance of cross-cut 50 yards, worth 1½ tons per fm. San Martin's winze, on the middle lode, is sunk below the 31 fm. level 17 yards 1 foot 9 inches; lode poor. The 30 fm. level, at Thorne's shaft, is east of No. 2 winze 9 yards, worth 1 ton of ore per fm. At Taylor's shaft, the 31 fm. level, on the north lode, is in advance of the shaft 54 yards 2 feet, worth 2½ tons per fm. The 31 end, on the south lode at this shaft is beyond the cross-cut 34 yards 2 feet, worth 1½ tons per fm. Alexandros winze, on this lode, is below the 31 fm. level 20 yards 0 feet 9 inches, worth 2 tons per fm. The tribute department is looking very well. The March raisings will exceed 300 tons, the estimated quantity; and our calculation for April is 270 tons. We have 80 pitches in work, employing, with the tutwork, 150 men.—A. MARTIN.

The Colonge Mining Company have advices down to the 17th inst.:—"The engine-shaft has been sunk 9 in. during the previous fortnight; the ground was hard, composed of grauwacke and killas, interspersed with porous quartz. The water had increased, and was expected to do so still further. The engine worked steadily with the increase of water. The depth of the engine-shaft was 18½ fms. from the surface, and below the deep adit. The winze in the northern end of the branch, from the hanging lode, had been sunk 1½ fms. by 12 men, at 82 shalers per fathom. The lode in the winze was 7 ft. to 8 ft. wide, containing 5 ft. of solid white ironstone, and a branch of good copper ore, varying from 6 in. to 1 ft. in width, with occasional stones of rich grey ore, and fine specimens of malachite or native copper. The winze in the northern end of the main or hanging lode had been completely drained and cleared up. The lode was about 10 ft. wide, with 6 ft. or 7 ft. of solid white ironstone, and a good branch of copper ore. The level driving on the lying lode had been driven 1 fm.; the lode continued poor. Preparations were being made for putting up dressing-floors.

FAHRENBERG.—The lode in the deep adit is slightly improved, and produces good stones of lead ore. The end is full of water, and the drain from the shaft, in dry weather, as much as 8 ft. per day.

CALCUL.—Upwards of 40 tons of blende and 40 tons of lead ore have been dressed, and are ready for market. They will be sold in a few days.

The Oberhof Mining Company have advices from their agent to the 17th inst.:—"The machine shaft below the Lahn level is progressing satisfactorily, and ground pretty easy, but water rather quick. Its present depth is about 6 fathoms, and we expect to reach the lode in about 3 fathoms further sinking, and, from the general appearance of the country, we have every reason to believe we shall find it productive. The copper lode in the western end of this level is just as when last reported on. We have three stopes in the back of this level; lode varying from 12 to 18 in. in width, and very productive for lead and blende. In the eastern winze, below the lode carries a small branch, which in general is found to be about 4 ft. from the lode. This branch we have already intersected, and we expect to cut the main lode in the course of a few days. A few fathoms above this, in the back of the Ueine, on the white rock, we have four stopes at work, yielding good work for lead and blende. We have, therefore, every reason to believe that the lode when reached in the cross-cut will be a productive one. In the end, driving west on the Demare lode, above the back of the Ueine level, the lode is full 3 ft. wide, yielding 6 tons of first quality blende per fm. We are stopping the back of this level, by four men, where we find the lode of the same size and character. I mentioned in my last report of a discovery we had made in boring a piece of ground to some old workings between the Ueine and Schelle gallery. Since then we have been busily engaged in bringing its full extent to surface.—Schelle Gallery: In this level we find the lode varying from 12 to 20 in. wide, solid silver-lead and blende, and in places the lode is composed of white rock lode, varying from 10 to 18 inches in width, composed of lead and blende, worth ½ a ton of the former and 1½ of the latter per fm.—Middle Gallery:

The great stopes continue productive. We have 136 miners employed in the mine, who are working well. Quantity of ground broken last month about 135 fms. Our dressing is progressing with as much speed as our present machinery will allow. We are, however, preparing to fix a new crusher and five new and larger heads of stamps, which, when completed, will materially add to our future production. We have a great quantity of work in the mine and on surface. We are also daily adding to it, and shall continue to do so until we have by far a greater stamping power and other appliances than we have.

The Pontigaud Mining Company have received a report from Captain Rickard, dated 21st April, from which the following are extracts:—

"ROCKE.—The adit level, south of St. Peter's shaft, is still looking well, and turning out 3 tons of ore per fm. The same level, north of the shaft, is looking very promising, and producing about 1 ton per fm. In a stope in the back of the deep adit, south of the shaft (St. Peter's), we have a fine course of ore for 3 metres wide. In the adit level, north of Anna's shaft, we have a kindly lode, yielding 10 cwt. of ore per fm. The 20 metre level, north of Anna's, continues in good ore ground, and will still turn out 1 ton of ore per fm., rich in silver. In the coming week, we hope to complete the guides in Anna's shaft, and begin to draw from there by St. Mary's steam-whim, and shall soon be in a position to begin taking away some of the ore ground already discovered there. The 40 metre level, south from cross-cut, north from Anna's shaft, on the eastern part of St. Mark's lode, is lying open good ore ground. We have commenced a rise in the back of this level, and find the lode in it the same in size and quality as in the level, averaging about 10 cwt. of silver-lead ore per fathom. The 80 metre level, south of St. Mary's engine-shaft, on the St. George lode, is still looking well. This winze is now down 20 metres, quite dry, and has yielded, on the No. 3 lode, is producing 1 ton of ore per fm. This being the bottom level, gives us great encouragement, to see the lode not only maintain this character, but improve as they go down. We shall use every means in our power to sink this shaft to the 100 metre level as soon as possible. We have now working in this mine six stopes, each with four men. These, with the ore from the levels, are giving good returns.

"ROSE.—Since my last, the winze sinking under the 60 metre level, south of the B lode, has passed through a floor of poor ground, about 1 metre thick, but is again looking well. This winze is now down 20 metres, quite dry, and has yielded, on an average, 2 tons of ore per fm. We hope to hole John's shaft to the 45 metre level about the end of this month, and have begun making preparations to draw from there with the steam-whim. Our tributers are still getting good wages, and working in excellent spirits.

"MICHEL.—Taylor's engine-shaft is nearly down for the 30 metre level. We have almost completed the foundation for the engine, and shall begin to fix it in a week or 10 days. The surface stopes never looked better, or yielded more ore to the number of men employed, than at this time.

"BARBER.—We have put the men to rise in the back of the 20 metre level, against the No. 2 winze, and the lode in the rise is looking very promising, and yielding good saving work. We expect this is the beginning of the long run of ore gone down in the bottom of the adit; if so, we shall soon be in a position to increase our returns here also. All our surface works are being carried on as fast as circumstances will permit, and the dressing of ore going on well."

The Wildberg Great Consolidated Mining Company have advices dated April 19:—"At the West Mine, the lode in the Blumenberg sink will produce 10 tons of silver-lead ore per fm. No. 2, middle stope, will produce 5 tons per fm. Beck's lode, driving east from the south cross-cut, will turn out from 4½ to 5 tons of silver-lead ore per fm. The cross-cut driving south in the deep adit level continues without alteration.—East Mine: Dean's lode, driving west from Michael's shaft, will yield 1½ ton of silver-lead ore per fm. The Weitang winze, sinking below the 30 fm. level, east of Michael's shaft, will produce 3½ tons of silver-lead ore per fathom. The Donnerberg winze, sinking below the 15 fm. level, east of Michael's shaft, will produce 5 tons of silver-lead ore per fm. The drying-house walls will be completed by the middle of next week. The stamps continue to work well, and I expect a good return of stamps this month. Fine weather has set in, and our surface operations are progressing rapidly; the greatest difficulty we have just now is in getting horses and carts to bring stones from the quarry to our new buildings. The engine-man is progressing very well with his work. The carpenter has commenced making a new wheel for the blast at the smelting-works, which will be completed in a fortnight.—JAMES M. CHAMBERLAIN.

The Liberty Mining Company have advices, per Union, from their resident director, dated Vancluse Mine, Virginia, April 4, of which the following are extracts:—"Your letter of the 9th of March reached me on the 5th, and the various accounts you request accompany this, and I trust will afford you full information on all points: I am most anxious to trade with houses in the large towns, and intend going to Philadelphia and Baltimore, and make arrangements to purchase our merchandise, &c., from establishments in those cities; this will effect a saving, I expect, of from 30 to 50 per cent., with 6 months' credit, if required. The erection of the new stamps progresses rapidly, the heavy work is done, and I hope a few days will see them in operation. During the last month, I have only been able to keep the 18 heads of stamps going at intervals, equal to about 15½ days, and have obtained during that period 550zs. 12 dwts. 12 grs. of refined gold, value about 225s., at which half a month's work leaves a profit on the whole month's cost. The more extensive the machinery and force worked here, the greater will be the comparative profit, as the expense of engines and superintendence would not require to be increased. A few more labourers will be necessary to work the 42 heads of stamps, and I have taken measures to procure them; their cost monthly will be but little. The only work to be done to perfect the working plant in the north part of the mine is the completion of the new stamps, pulleys, and tramway at centre shaft, and the tramway from north (new) shaft to north wharf-shaft; this will not occupy much time, as the principal work is done already. I believe I may now authorize the board to inform the shareholders that the lode is in sight; and though we have had great difficulties to contend with, I now confidently expect that by the end of my third year as resident director this company will have shown that gold mining in Virginia, conducted on the English mining system, can be made a permanently paying investment. No exertion shall be spared by me to save expense, and pay good dividends."

We are informed that the official advices which the Anglo-Californian Gold Mining Company ought to have received by the mail, on Monday, have miscarried. A private letter, however, from the agent in California, to the chairman, has come to hand. This contains no details; but it appears that during the first 24 hours' continuous workings, the machinery reduced 32 tons of ore, which produced \$1000 of gold. We have also authority for stating, that a letter of credit for the amount due to Messrs. Burgoyne has been forwarded to Sir Henry Huntley, and that, consequently, the property may be considered as redeemed.

The South Australian Copper Company have shipped, per the South Sea, a large quantity of castings for smelting-furnaces and other machinery, made by Messrs. Nicholls and Williams, of Tavistock. The South Sea will sail for Australia in a few days, and an experienced smelter has been engaged, who will proceed by the Oliver Leving, about the 5th of next month.

At the Foreign Vineyard Association half-yearly meeting (the Right Hon. Lord Muskerry in the chair), the report of the directors was adopted. It was determined that an agency should be established in Paris, at the forthcoming Exhibition. Since the last meeting had been formed with several influential clubs, as well as a regimental and navy mess, &c. A dividend of 10 per cent. per annum was declared, to be paid for the six months ending Feb. 28, 1855. Col. Wyndham, and Messrs. Palmer and Slack, the retiring directors, were re-elected, as well as Messrs. Heath and Vibert, the auditors. The directors were voted a sum of 364 guineas, as a remuneration for their past services. Votes of thanks were given to the directors and manager, which were suitably acknowledged.

The Gold Mining Share Market continues neglected, and the only transactions effected yesterday was in Agua Fria at ½ dis. The closing price of Anglo-Californian was ¼ to ½; Carsons Creek, ¼ to ½; Colonial Gold, ¾ to ¾; Great Nugget Vein (registered), ¾ to ¾; Nouveau Monde, ¾ to ¾; Quartz Rock, ¾ to ¾; Waller, ¾ to ¾; West Mariposa, ¾ to ¾.

In Miscellaneous Shares, the market has been quiet, and the fluctuations very trifling. North British Australasian were a shade lower yesterday, changing hands at 3½. Peninsular and Oriental slightly improved, transactions taking place at 6½ to 6½, and the closing price marked at 6½ to 6½. Crystal Palace shares were firm at 3½ to 3½; ditto, Preference, 4½ pm.; Submarine Telegraph scrip, ¾. The closing price of Australian Agricultural was 28 to 30; Peel River, 2½ to 2½; Netherlands, 1½ to 1½; South Australian Land, 1½ to 1½; Van Diemen's Land, 12½ to 13; Berlin Water-Works, 3 to 3½; Electric Telegraph, 14 to 15; Mexican and South American, 6½ to 7; Royal Mail Steam, 68 to 70, ex div. In Joint-Stock Banks, yesterday, shares were freely dealt in, changing hands at the following prices:—Australasia, 80½; Chartered Bank of Asia, 4½; Commercial of London, 29½; English, Scottish, and Australian Chartered, 16½; London Chartered Bank of Australia, 20; Oriental Bank Corporation, 39; Provincial of Ireland, 50½; Union of Australia, 67½ to 68; Union of London, 30 to 30½. The closing quotation of Chartered Bank of India, Australia, and China was ½ to ½ dis.; New South Wales, 83 to 83½; Union of Australia, new, 7½ to 8½.

COPPER MINING IN AMERICA.—The following information was received by the last mail from the United States, relative to the Tennessee Copper Mines:—The sales agent in New York writes,—"I have shipped to Liverpool copper ores—Per S. Larrabee ... 300 boxes from the Tennessee Mine. 400 boxes from the Isabella Mine. 300 boxes from the Polk County Mines.

Total ... 1000 boxes. (This vessel has arrived at Liverpool.) Per R. Conly ... 120 boxes from the Tennessee Mine. 216 boxes from the Isabella Mine. 404 boxes from the Polk County Mines.

Total ... 740 boxes. Per Oueco ... 50 boxes from the Isabella Mine. Per R. M. Mills ... 200 boxes from the Isabella Mine. Per Tamerlane ... 100 boxes from the Isabella Mine. 100 boxes from the Tennessee Mine. 50 boxes from the Polk County Mines. 250 boxes from the Tennessee Mine. 300 boxes from the Isabella Mine.

The assay exceed 20 per cent. for copper. Total about 740 tons. The ore is now arriving very freely at Savannah; we have at Savannah, and on the railroad, about 300 tons. I have secured room in a vessel for 1000 boxes, which is now being shipped. My wish is, that no other use be made of this information than is warranted by the nature of the case. What I mean is, that I do not wish any gas made out of a regular business transaction. We can ship ore enough, if we can only get it away; but the tide is turning just now, and I am applied to by Dr. Keener, of Baltimore, Mr. Davis, of Boston, and also from New Haven, for ores.

P.S.—They have cut a rich lode of black copper at the Culchote Mine." One of the proprietors, and the general superintendent of the mines, writes to a friend in New York as follows:—"The Polk, Isabella, Mary's, and Tennessee, are now producing well, and we are constantly unloading more and more of their real worth. We take out but little, comparatively, of the ore we expose, as we are necessarily limited in our means of transport from the mines; and it is desirable that each mine should send (smelter's tons) 154; Isabella, 147; Polk County, 107. This month the Mary's Mine will come into the list, and we anticipate sending away 500 tons in April. Some recent deeper examinations on Copper Hill, at Polk and Mary's Mines, made by Captain Raft, have shown some unexpected results. He finds, 20 ft. below the first level, where we supposed most of our black vitreous ore resided, a new lode, of not simply black ore, containing more grey and yellow ore than we usually find in the upper levels, but mainly like our

upper ore, except that they are richer and yield better. In the western level also, on the Tennessee Mine, Capt. Tomkins, in running in a short adit to drain a portion of the vein, finds a heavier lode of black ore than we had above."

One of the parties largely interested in the Tennessee Mines, and who recently returned from a visit to the district, writes from New York, under date April 9:—"The business at the mines is most cheering. Had we furnaces at the mines, to be operated with wood until the railroad could be built, these mines would make money faster, even now, than any others in the country, if not faster than any others in the world. All that is requisite is the skill to erect and work the furnaces, and they would produce the capital for the railroad. The Culchote Company have cut a large vein of ore, producing the black ore in large quantities. This development enhances the value of the McCoy property 50 per cent."

Another gentleman in New York, in no way interested in the Culchote Company, writing to his correspondent in London, under date April 10, says:—"I will just add, that the Culchote Company have opened a fine mine: the vein was cut at 60 ft. depth, and is 14 ft. wide; it is represented as being just below Biggs' shaft, and on the same ridge."

The arrivals at Swansea include—from St. Malo, 25 tons of lead ore, and 20 tons of zinc ore.

THE GOLD FIELDS OF VICTORIA.—Return of the comparative produce in the years 1852, 1853, 1854:—

Years.	Ascertained ozs.	Unrecorded ozs.	Total.	Price per oz.	Value.
1852	3,159,322	1,083,325	4,242,647	70s.	\$14,866,799
1853	2,274,152	816,180	3,090,332	75s.	11,584,782
1854	1,831,494	361,354	2,192,848	80s.	8,770,795

SHEFFIELD, APRIL 25.—Our correspondents (Messrs. E. Smith and Son) state that they have nothing new to remark this week as to the market for mining shares; prices are much the same. In railways, the business done has been unimportant, but as money is more plentiful, and not much required for trading purposes, some of it has found its way into the Share Market, and tends to support prices.

Shares. Mines. Paid. Price.

100 ... Brightside and Froggatt Grove	50	70 75
1000 ... Calver Sough and Wren Park	10	1½ 1½
1800 ... Cranfant	3	1½ 2
1200 ... Eyan Extension	10	25 27
200 ... Peak United	7½	7½ 8½
900 ... Prince of Wales	6½	8½
1024 ... West Phoenix	20½	3 3½
1536 ... Wheal Gill	14 15 2	2 3
3400 ... Wheal Mary	6½	1½ 2

HULL, APRIL 26.—Our correspondents (Messrs. T. W. Flint and Co.) state they have some pleasure in noticing a little improvement in their market for mining shares, there having been more enquiries than for some time past. The market for railway shares has been very limited during the week, although there is a strong disposition to invest, if any hope of peace could be entertained on grounds approaching certainty. Hull and Selby are in request, but there is no stock on the market.

LEAD ORES.

Mines.	Tons.	Price per ton.	Purchasers.
Wheal Whitelegg	22	£17 5 0	J. T. Treffy.
ditto	11	9 10 0	ditto

Sold on the 21st April.

Mines.	Tons.	Price per ton.	Purchasers.
East Wheel Rose	77	£16 18 0	Enthoven and Sons.
ditto	70	18 1 0	ditto
ditto	44	17 9 0	ditto
ditto	29	12 6 0	ditto
ditto	18	17 11 0	ditto

Sold on the 23d April.

Mines.	Tons.	Price per ton.	Purchasers.
Promogoch	50	£13 6 6	Walker, Parker, & Co.
Cwm Erfin	15½	15 16 6	Sims, Williams, & Co.
ditto	15½	15 16 6	J. Bibby, Sons, & Co.
Cefn Brynno	50	13 12 6	Newton, Keates, & Co.

Ticketing at the King's Head Hotel, Holywell, 26th April.

Mines.	Tons.	Price per ton.	Purchasers.
Pantymwyn	10	£12 8 0	J. P. Eytton.
Penrynblas	9	13 1 6	Newton, Keates, & Co.
Westminster	13	8 0	J. P. Eytton.
Maeswain	70	13 11 6	Walker, Parker, & Co.
Belgraves	10	13 10 6	J. P. Eytton.
Ty-Maen	11½	13 5 0	Newton, Keates, & Co.
Brynford Hall	8½	13 10 6	ditto
ditto	1½	16 6 0	J. P. Eytton.
Minera	150	13 18 6	Newton, Keates, & Co.

BLACK TIN.

Mines.	Tons.	Price per ton.	Amount.	Purchasers.
East Wh. Margaret	10 7 0	£16	—	—
Great Polgoth	10 5 3	17	—	Daubuz.

Sold on the 19th April.

Mines.	Tons.	Price per ton.	Amount.	Purchasers.
East Wheel Vor	3 17 0	32	£197 16 10	—
Wheal Marshall	1 8 2	0	—	83 19 3

Sold on the 23d April.

Mines.	Tons.	Price per ton.	Amount.	Purchasers.
East Wheel Vor	3 17 0	32	£197 16 10	—
Wheal Marshall	1 8 2	0	—	83 19 3

COPPER ORES.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
United Mines	116	£5 3 6	South Caradon	113	£17 15 0
ditto	85	6 6 0	ditto	96	8 18 6
ditto	85	5 14 6	ditto	64	9 1 6

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

ENGLISH AND AUSTRALIAN COPPER COMPANY.—Sir: Some time ago I was told that the result of the late committee of enquiry would be either to dispose of the Australian branch, or remove the smelting works to the coast, so as to avoid the great expense attending the inland carriage of coal-bricks, and the copper back again to the coast, which has been the cause of the drawback and unprofitable results. I now find that the new manager has discovered, at the eleventh hour, that he can smelt with the Sydney coal, and that he will be able to convey this coal to the works and realise profits. I cannot believe this to be correct. The company found the carriage of pure coal and the patent fuel too expensive to allow profitable results; if so, how can the carriage of an inferior coal, which only contains about 60 per cent of carbon, and necessarily requiring a larger amount for smelting a given quantity of ore, produce better results? I hope the late manager, or some of your correspondents, will explain this curious anomaly. —AN ENQUIRER.

* **A Speculator** (Cornhill).—Many of the patents taken out for smelting copper ores have proved abortive. A process that will answer very well in a crucible, may be very ineffective and expensive in a furnace. In many instances the fluxes cannot be obtained in sufficient quantities; although a fact may be often scientifically demonstrated, yet, when practically put to work, it fails, regarded commercially.

AUSTRALIAN CORDILLERA GOLD MINING COMPANY.—Sir: Last month you published a communication from the Peel River Company, in which it was stated that "the land which had been leased to the Cordillera Company, and upon which 1457 ozs. of gold had been raised during ten months, was delivered over to the Peel River Company's general superintendent on the 19th December last." Can any of your readers inform me what has become of this large amount of gold, and likewise where the affairs of the Cordillera Company are carried on, as I have lost sight of the whereabouts of the directors for some time? —A SUBSCRIBER.

* **W. R. (Exeter).**—If the present system of management of slate quarries is conducted on the principle that our correspondent infers, there is no doubt that much money may be expended, without any corresponding result. It is, unfortunately, too often the case that these establishments are so managed, that only the officials obtain a living from them, while the interests of the shareholders are entirely disregarded. It would be invidious to mention the names of the several quarries that are labouring under this great defect, but we must hope that the attention which has been drawn to them will cause a better and more economical mode of working for the future. The matter is in the hands of the shareholders, and they should see that a due supervision is exercised, whereby their interests could be protected.

* **An Inventor** (Camberwell).—Numerous attempts have been made for years past to obtain motive power by similar means to those mentioned, as well as from the products of combustion, and from condensed carbonic acid. We believe that, with the latter, Sir Mark Isambard Brunel attained nearest to success; but hitherto they have all proved failures. In 1853 a great sensation was made in New York, by the public attention being called to Salomon's carbonic acid gas engine, which was to supersede everything, and be "the crowning work of motive power." A company was formed to carry out the object, but the affair, like the rest, failed. Another scheme in the same year, which was "to eclipse all competitors," was brought forward by Mr. J. E. Serrell, of New York. This engine was to be worked by the combustion of oil, spirits, or other combustible matter. Four exhausting chambers were placed at an angle of 90° with each other, and each containing a lamp; a revolving lamp-lighter was employed, which lit them in succession, and caused a reciprocating motion to the piston, the pressure of from 8 lbs. to 11 lbs. on the inch. This scheme, however, was never matured, and also evaporated, like its own products of combustion.

MACHENNA, COUNTY FERMANAGH, IRELAND.—Sir: I feel certain that the London shareholders in this concern are unaware that no communication has been received by me from the treasurer, Mr. O. Raymond, Stock Exchange, and 6, Bank-chambers, London, since the 10th of January. The sooner the shareholders meet the better, as their affairs here require immediate attention. —F. LISABY, C.E.: April 10.

* **C. L. (Penzance).**—If a proper system of accounts were kept, and the Cost-book System carried out in its original integrity, such deplorable disclosures and disgraceful results would be avoided.

LIGHTS ON LODES.—Sir: I am disposed to think Mr. Gill's version of the cause of lights on lodes a very probable one, but am unable to separate my mind from the connection of burnt appearances with the appearance of ignited hydrogen. It is scarcely likely that such effects would be observable in some cases at least, since all lodes are not situated in barren ground. The explanation alluded to does, from its colour, coincide with several of the observed cases. Query, might some of the hot copper lodes lately described be apt to show lights, since they have the very process very actively going on in them which Mr. Gill describes? I have lately been informed of 13 rich dividend-paying mines which produced jack shallow (some of them selling it), and which in depth decreased or died out. What is the value to be attached to the appearance of jack shallow in copper or lead lodes, for improvement in the other metals in quantity or quality in depth? I am told nearly all the rich western copper mines produced jack shallow. Capt. Ennor speaks of a law of lodes preventing, allowing for certain exceptions, two lodes productive to any great amount occurring near each other. His reason looks to me correct; still, I have heard it opposed. What is the average distance within which two lodes could exist, each good one, not allowing for exceptional cases? If Mr. Ennor will favour with replies, he will much oblige. I do not wish to ask too many questions. If Mr. Ennor would publish his views in a volume, giving statistics, I would gladly purchase it. —A. K.: Bideford, April 25.

* **Inquirer** (Brompton).—Convicts have been employed in mines in the United Kingdom. About the year 1700 there were several on the lead mines at Bwlchyr Eglwr-hir, in Cardiganshire. They were apprenticed for a term of five years; if they behaved themselves well during that period they were liberated at its termination. The majority of them were from the metropolis.

* **T. L. B. (Penrith).**—The seasons in California are more inconstant than our own. Last season mining operations were impeded by the long and severe drought which prevailed; the season previous they could not be undertaken in consequence of the heavy inundations. The California miners are actively engaged in forming water companies; they, as well as our accredited associations, see the necessity of having a constant supply of water, as well as the power to regulate it. As wood becomes dearer, in all probability, at no distant period, water-power will, when it can be obtained in sufficient quantities, in a great measure supersede steam.

AVE MARIA COMPANY.—Mr. O'Connor has left some time for California; and it is anticipated that he will return to England about the end of September. We understand his commission is connected with the formation of the Sierra Nevada Water Company, from Lake Truckee to Marysville; this will supply a number of ledges, and the placer diggings, for a considerable distance.

* **A. K. (Bideford).**—The theory has never been disputed, and the lights have generally been supposed to arise from exhalations under electrical influences, combined with the atmosphere. From the illegibility of the communication, owing to the paleness of the ink, we are unable to decipher much of what our correspondent writes.

HEAVY EXPENSES—SHOULD NOT MEETINGS BE HELD IN LONDON?—Sir: In a late impression of your Journal you made an observation relative to the folly of mining shareholders withholding the payment of their calls, thereby submitting to the loss of their shares, and paralysing the efforts of the managers in carrying on the works to a successful termination. I am inclined to think that you are not thoroughly acquainted with the reckless outlay of capital, and hole-and-corner management, that has to be submitted to by the adventurers in many of these specious but unfortunate undertakings; therefore, to enlighten you upon this subject, I will state a few facts relative to a mine in which I, unfortunately, have an interest. In Jan., 1854, our shares were in the market at 32s. each; since that period heavy calls have been made every two months, making, with the expenses of transaction, a gross payment of about 42s. per share, and they figure in the market at the present time at the magnificent sum of 18s. per share—a result, in my opinion, brought about by the want of a sufficient supervision on the part of the shareholders over their property. But how this supervision is to be obtained is a matter of speculation, for all that the distant shareholders know about it is the name of the purser, and a modest request that we should attend a meeting "on the mine" every two months, involving a journey into Cornwall of some 300 miles; this request being invariably followed in a few days by the intimation that we are to remit, with all possible dispatch, a certain sum to the aforesaid purser, in accordance with a resolution appended to the report of March, 1854, by a few names; and in the other reports by "adventurers present." Surely, Sir, it would not be too much to expect that the meetings of this importance to shareholders, where their property is concerned, should be held in London, where the majority of the adventurers may be presumed to reside. Respecting the costs of this undertaking, the balance-sheets for twelve months show an account of some 7000s. for the sale of ore; to obtain this sum an outlay of 23,000s. has been contracted. I am aware that great utility is requisite in the formation of mines; but Sir, do you think it reasonable to require a gross payment of twelve months' calls, and every other item to the same extravagant figure; for instance, timber nearly 1000s., labour cost about 8000s., for the same period. These can be proved to be facts, by glancing over last year's reports. —A SHAREHOLDER: London, April 25.

* **Miner** (Camberwell).—Argentiferous gold, or electrum, is distinguished by its silver-white colour; before the blow-pipe it fuses into a more or less pale yellow globule. It is found at Schlangenber, in Siberia, in tubular crystals and imperfect cubes; also at Kongsberg, in Norway, and in Transylvania.

* **J. B. (Palmouth).**—If adventurers and pursers would follow the Cost-book System, and act strictly to its provisions, much fraud would be prevented, and mining would be regarded more as an enterprise than an adventure. Many mines at the first starting have not paid their cost; this is no reason why they should be abandoned. There can be no question that mining has been brought into disrepute, owing to the laxity of conduct generally pursued by all connected with it; it is to be hoped that a better system will be introduced, which at the same time it efficiently develops our mineral industry, will prevent designing knaves from plundering the public.

NORTH BRITISH AUSTRALIAN COMPANY.—Sir: The meeting held at the London Tavern, on Tuesday last, was not a satisfactory one. The shareholders, of whom there was a large number present, were dissatisfied with the report and state of affairs generally. The tabular statements appended to the report exhibited a small increase of stock at the several stages of births, while the number sold and boiled down was little more than the number bought. One of the managers, Mr. Taylor, represented that the agency operations of the company's manager at Sydney were very profitable, but unfortunately the amount was not exhibited in the accounts; while, on the other hand, the inability to pay now a dividend for the year ending 30th of June, 1854, arises from the necessity of meeting bills of the Sydney agent, drawn on London, for advances made on goods at Sydney. It is clearly desirable that these agency and commission transactions should be kept and shown distinct from the business more properly belonging to the company. The opinion of the meeting was, that the mine in New Zealand was swallowing a large amount of capital. The directors were displeased with the amount of remuneration offered by the shareholders, 500s. per annum, or 50s. each (the two managing directors receive 300s. per annum between them); but seeing the committee have little or no occasion to meet except when mails arrive from Australia, once a fortnight or so, if so often, the feeling of the meeting was that 300s. was ample. However, Mr. Fawcett, from his connection with the managers in various ways, thought he was better able than others to judge what was the proper amount to be given, and recommended accordingly, whether judiciously or not is questionable. —ALQUINS: April 19.

We have particularly to request that subscribers and others, in paying accounts, will send cheques or post-office orders, as postage-stamps cannot be received.

COALS IN CALIFORNIA.—Sir: I infer from your paragraph (April 14) that "E. W. W." (Masbro) raised a question on this subject. Will you permit me to reply to it in the affirmative? I had the pleasure of pointing out a coal field to Mr. McKay, of San Francisco, and which he then purchased. It lays some 10 or 12 miles south of Bonita, and about 35 miles west of San Francisco. Of course the purchase was a commercial speculation. It is not in work yet. —W. EATHOUSE GILL: Totnes.

WATER-POWER.—Sir: Will any of your correspondents favour me with an estimate of the "commercial horse-power" of an over-shot wheel, 40 ft. diameter, 2½ ft. breast, buckets 14 in. deep, fed by a stream of water, through a leaf 2½ ft. deep, the depth of water in the leaf being 2½ in.—430 ft. in length of which flows on to the wheel per minute. —AN ENQUIRER.

* **A Shareholder** (Mile-end).—The Castle Dinas meeting, yesterday week, at Mr. Sterne's offices, Great St. Helens, was productive of no results. The subject will be brought forward at the next periodical meeting, when full particulars will be laid before our readers.

MARIQUITA AND NEW GRANADA MINING COMPANY.—We do not know what foundation the committee of investigation had for stating that 2800 shares had been transferred by Messrs. J. D. Powles and Matthew Plummer to pack the meetings, nor are we aware that this statement has been explained or denied. "Marmato" should enquire at the office what are the reasons for working the three mines at a loss, as well as the duties of the acting superintendent, and the period at which the Santa Ana Mines were taken possession of, as well as whether Mr. R. J. Treffry was dismissed, or retired of his own accord. It is not probable that directors will enter into a paper war with every shareholder who finds himself aggrieved. We by no means mean to screen the conduct of the directors, but we do mean to do justice to the shareholders. In all associations where there are disputes, the shareholders can never be brought to act with unanimity, and this is the primary cause where in every case boards are able to discomfit any attempts to unsettle them.

* **Junius.**—The communications on this subject have been multifarious; though of general interest they are not of special importance, and the question but now excites little notice, except with those who are embarked in the controversy. Many crude theories have been raised, but it would be useless to insert all the arguments which have been put forward, as it would only lead to endless discussion, without arriving at any practical result.

* **C. J. R.**—The inventor of the new double reverberatory furnace, for the smelting of lead and copper ores, begs to inform his numerous applicants that all enquiries will shortly be attended to, when he hopes to have his patent sealed, next month. A full description of the furnace will appear in an early number of the Mining Journal.

LIANDUNO MINE.—The report on the present operations and prospects of this mine shall appear in our next Journal.

PORT PHILLIP GOLD MINING COMPANY.—Sir: I beg to inform "Iago" that I am a shareholder in this company, and one of those who gave 4s. each for their shares; and, acting upon the advice of the late Ald. Thompson, I have continued to hold, and recommend others to buy. In reply to an enquiry which I felt it to be my duty to make, Ald. Thompson wrote to me:—"The promoters are men of spotless honour in the City of London, and they have employed Mr. Evan Hopkins (whom I have had engagements with) to establish the affair in Australia. I am a holder of 2500 shares, and shall hold, and recommend you to do so likewise." I am glad to see that Mr. Evan Hopkins is disposed to corroborate the alderman's remark as to the uprightness of character of the directors; and, as the reverse was the only plea upon which an endeavour was made to frighten shareholders out of this most valuable concern, I hope soon to see the property represented by its proper value in the market. I think the following may be taken as a summary, as far as disclosed, of the present position of the company:—Assay Office and Smelting: Profits realised, 12,000s.; add to this 4000s., premiums on sale of shares in London: this will be equal to a dividend of 3s. per share, and leave 1000s. for the reserve fund. The available assets are very large, about 40,000s., or 50,000s.; and the mineral concessions to this company at the Ovens are of incalculable value, abounding in tin ore almost at surface, charged with gold equal to 750s. per ton, and separated from the alluvium by the simple process of washing, abundance of water for which purpose exists upon the spot.—JURISTIA: Stourport, April 23.

SOUTH DINO DONG MINE.—A Shareholder (Queen-street).—The company have no office in London; we believe Mr. Pernewan, of Penzance, is the purser, and from whom any information can be obtained.

* **Hibernicus** (Bayswater).—We have no doubt the introduction of the machine patented, and manufactured by Messrs. Gwynne, of Essex Wharf, Strand, for the compression and manufacture of cast iron into a pure and valuable fuel for metallurgical purposes into Ireland, will eventually be hailed as a great boon to that country. We have, on several occasions, since the publication of the specification, referred to the process; and, as a powerful machine has been recently erected on the premises of the patentees, which will commence work, we are informed, on Monday, we shall, most probably, be able to give the practical results in our next Journal.

* **B. M. (Aberdeen).**—We shall be glad of some particulars when the subject is sufficiently matured.

* **J. B. W. (Ludlow Iron-works).**—The company have made returns of gold; they started with too limited a capital. According to all received accounts, they have one of the best locations in California; but unfortunately, owing to a deficiency of water power, they have not been able to avail themselves of all the advantages the property possesses. If such a sum is subscribed as will enable them to obtain water by artificial means, it is the opinion of practical men that the returns will be continuous; but to ensure this, the shareholders in the present crisis should support the directors.

SALES OF LEAD ORES.—Sir: In the quarterly returns of the sale of lead ore, in your Journal of the 14th inst., you state that the Tailwin Mine has sold 50 tons of ore, at 383s., whereas the price realised was 633s.—H. SYNDERCOMBE: 33, Moorgate-street, London, April 26.

* **A. Q. A.**—We believe the quotation referred to was correct; and having made the necessary enquiries, we give the present price in our Share List.

* **G. C. (Thurloe-square).**—The principal is the engine-shaft; this is quite apart from that through which the men descend. In general, copper and lead mines are considered to be well ventilated; the greatest number of accidents occur in coal mines. When a better system is adopted, there can be no question but that it will meet with its reward.

CALIFORNIA.—We have received from our correspondent, Mr. P. Cadell, of Quartzburg, a list of the quartz mining companies incorporated in California, with their capital, and other particulars, which we shall publish in our next Journal; when also will appear the conclusion of Mr. Waddell's interesting report, and valuable statistical information.

* **A. B. (Mold).**—A letter addressed to Mr. Franklin Coxworthy, Follet, Dieppe, will reach. We do not know the address of Mr. Wm. Radley, Ch.E.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, APRIL 28, 1855.

While the anxious sympathies of benevolent individuals, and the careful attention of learned societies, are earnestly directed to the task of rescuing society from the reproach which attaches to it from the fearful annual sacrifice of human life in our coal mines, it is highly gratifying to perceive that our mining operatives are beginning to be themselves sensibly alive to their own interests and their own safety. In a memorial presented to the Government by the coal miners of Lancashire, Cheshire, Northumberland, and Durham, they announce that they have learned with satisfaction that the principal coal proprietors and agents are at length convinced of the necessity of enforcing more stringent regulations in all collieries, thereby bringing up the inferior management of the many to the superior management of other collieries, whose proprietors are anxious to protect their workmen, and also to preserve their own property. They further state that they have read the copy of rules put forward by Mr. Mackworth, Inspector of Mines, and also the rules submitted by him jointly with his co-inspector, Mr. Dickinson, of which, with one or two exceptions, they highly approved; at the same time expressing their apprehension that any code of rules which shall not be embodied in an Act of Parliament, with proper penalties attached to enforce obedience by workmen, officers, agents, and owners, will not be sufficiently attended to so as to ensure any considerable diminution of colliery accidents and casualties.

It is always prudent in legislation to learn the feelings, and adopt, as far as practicable, the views of those for whose benefit or protection measures are designed; the operatives, therefore, claim that any bill to be passed should embrace, amongst others, the following particular provisions, and enactments:—That all shafts should be sunk to the depth of the royalty, and that there shall not be less than two shafts in any coal-field, with several yards of rock between them; such shafts to be of such areas as to admit sufficient atmospheric air to keep all the working places freely ventilated. They further stipulate, that when the workings shall have become so extensive, that accumulations of injurious gases cannot be properly cleared away by the body of circulating air, other shafts may be sunk to the rise of the coal seam, and proper air-ways opened between them and the shafts previously sunk; care being taken that when the workings of any colliery extend two miles another shaft be sunk. In addition to the appointment of a proper staff of sub-inspectors, who shall have districts so situated as to ensure, on an average, a monthly examination, with weekly reports to the inspectors, they recommend the appointment of a Board of Control and Court of Appeal, to manage the whole system of inspection, and to decide all disputed cases between owners, inspectors, and workmen, on points connected with the inspection or safety of mines. To that board should be confided the selection and examination, of course competitive, of inspectors, and all regulations for the system of education; and we are particularly pleased to perceive that the men themselves recommend that young boys between 10 and 14 years of age should be obliged to attend school some part of the day, so that the next generation may be properly educated. They also urge an alteration in the system of summoning juries on coroners' inquests, and a power to them of inspecting localities which have been the scenes of casualties. Two further suggestions are added—namely, that the inspectors should be empowered to institute proceedings at law—to recover damages from colliery

owners for death or injuries to any miner, where the same shall have been occasioned by the neglect of owners or agents; such damages, in cases of injury, to be for the benefit of the party injured, in case of death for the nearest relatives of the deceased; and that inspectors be strictly prohibited from giving notice of their intention to inspect to the owners or managers of collieries. These suggestions they pray may be embodied in any bill which shall be introduced or passed through the Legislature: and while we consider the proposal of them a test both of the intelligence and sincerity of the operatives, we trust that aristocratic influences will not be permitted to interfere, and that we shall not have the statute book disgraced by mere class legislation, shielding the employer, and aimed only at the employed.

Our Journal this day contains two highly interesting communications in reference to this important subject, one from our really practical and valued correspondent, Mr. MARTIN JUDE, and the other from a gentleman with whom our readers are equally well acquainted, Mr. MATTHIAS DUNN, one of the Government Inspectors of Mines. Mr. JUDE, speaking the sentiments and feelings of the coal mining operatives of the north, may be fairly considered their organ and their advocate, and when the intended deputation of coal miners shall visit London, to submit their views to the Legislature, a more judicious selection cannot be made by them than that of Mr. JUDE to appear as one of their representatives. We are much gratified to learn, from the official authority of Mr. DUNN, that the average of fatal casualties in the coal mines of Durham, Northumberland, and Cumberland, has, for the last quarter, sensibly diminished; but in attributing this favourable change to the present system of inspection, we cannot agree with him that it furnishes any argument against more extensive arrangements, or a more enlarged staff for that purpose. Mr. DUNN must be well aware that, from the present defective system, many of the very frightful accidents which daily occur in coal mines never officially reach the ears of the inspectors, and are, consequently, not submitted by them to the authorities of the State. Losses of limbs and of sight, with many other cases of frightful mutilation, are concealed from the inspectors, and it not being, in the existing state of the law, compulsory on colliery proprietors and managers to procure or supply such returns, nor part of the duty of the inspectors to obtain such, both the Government and the public are kept in the dark as to their extent. What would be thought of official returns from the field of battle which would enumerate only those killed in action, and suppress both the names and injuries of those severely wounded? In the name of common sense and common justice we protest against a similar absurdity in the returns of colliery casualties, and shall never cease to insist that any system of inspection is but a mockery and a delusion which disregards and suppresses all mention of casualties by which men are maimed and mutilated, perhaps, for life, and by which families are almost as completely deprived of the exertions of their parents and their protectors as they would be by death. It has hitherto been the practice to take the returns from the census; those, we believe, to be fallacious, and greatly beneath the truth, and we venture to predict that when the authentic information which we have reason to anticipate, shall be supplied by the promised returns of Mr. HUNT, from the Mining Record Office, it will be found that the casualties greatly exceed what the public have hitherto been led to expect. If our confident anticipations shall be realised, a further convincing—indeed, an unanswerable—argument will be afforded, not only for an extended, but also for an improved, system of inspection.

We are induced again to refer to the recent important statements of Mr. EDWIN CHADWICK, bearing on this subject; it was stated by him that at the time of the first factory commission, the central board was consulted by the Prussian Government on the entire subject of employment in mines as well as in manufactories, and they advised the adoption of the principle of imposing all the consequences as insurance charges upon this branch of industry. Although the principle was not adopted in this country, it was adopted in Prussia, and the Prussian code contained the following regulations, in which it was applied:—"The proprietors of mines are bound to take care of the miners who are wounded, or fall into bad health, in their service. When the provincial laws do not contain any express provision thereon, the person who works the mine shall pay to the sick or wounded workman four weeks' wages, if the produce of the mine does not cover the expense of the working, or if it be only just equal to it, or if it be required to defray the antecedent expenses of the mine; and when the mine produces a sufficient dividend, the workman shall be paid eight weeks wages, in case the illness lasts that length of time. If the illness last a greater length of time, the miners shall be supported out of the sick fund. The expenses of medical treatment, and of the burial of a miner, wounded, or killed by accident, shall be defrayed from the same fund. The widow of a miner has also the right to claim the gratuitous wages fixed by Article 15. The gratuitous wages granted to the miner in case of wounds or death are not allowed if the miner has killed or wounded himself with premeditation, or by gross neglect, or by working otherwise than in the mine. If the wound or death has been occasioned by malice, or the gross neglect of a third person, the latter shall indemnify the sick fund and the proprietors of the mine."

When we advert to the consideration of comparative results, we find, from published Government returns, the mortality from accidents was, in the coal mines of—

	Killed. Persons.
Prussia	1.89 per 1000 per ann.
Belgium	2.8 " "
England	4.5 " "
Staffordshire	7.3 " "

In the country where the assurance charge and responsibilities were at the highest, the so-called accidents were at the lowest, or one-quarter those in England, whilst the money results and productiveness of the mines, as testified more directly, of France and Belgium were better than in England. If, from the bad ventilation of the mines, there was an excess of sickness, the cost of that sickness fell not upon the parish, or upon public rates, but upon the adventure, and the adventurers looked seriously to the practical means of prevention; if from ignorance on the part of the workmen Davy-lamps were misused, and destructive explosions were occasioned, the consequent loss of life, and orphanages, and widowhood, were charged upon the adventure; and there was no treating the ignorance of workpeople as an insuperable barrier to improvements, but the means of popular and practical education, and the selection of well-educated and trustworthy men, were anxiously regarded as means of avoiding loss.

When legislation is impending, it is not only desirable, but essential, that the fullest information should be placed before the public. We have repeatedly arraigned the coroner system, both in respect of the individuals who preside, and of the constitution of the juries who adjudge. The defective legal training of the former, and the apparent limited authority with which they are invested, unsuit them for the exercise of high legal functions; while the selection of the latter, often the result of contrivance and favouritism, throws discredit on the system. The court of the coroner ought to be treated, as other tribunals have been, as obsolete, and incapable of improvement by mere legislation. In order to satisfy the requirements of the public, the exigencies of the evil, and the spirit of the age, some other system ought to be devised for enquiring into the causes of railway and colliery calamities, which may be fairly classed in the same category. According to the returns of Mr. MACKWORTH, the annual number of deaths amongst miners by violence was 4 per 1000, which would, on our mining population of over 300,000, exceed 1200, exclusive of those, far more numerous, who are maimed, mutilated, and disabled. Taking all casualties together, the wear and tear of the working classes, on whom, and on whose exertions, the wealth and political importance of the empire so materially depend, greatly exceed the casualties even of war. This Journal has been long and zealously devoted to the sustenance of every proposal intended for the amelioration of the social condition of the mining classes, as well as for the security of their lives and limbs, and we cannot but regard a movement originating with the men themselves as indicative of educational improvement on their part, and as demanding peculiar attention from the authorities. Parliament has too long hesitated to place this branch of our law on an enlightened footing—the interests of the mining population have been too long sacrificed in the conflicts of parties, and in the shufflings of the cards for place. Blue-books, containing the infernal speculations of theorists, and the dubious recommendations of select committees, have been thrown aside as waste-paper, and forgotten; but an earnest remonstrance, originating with the operative classes themselves, and demanding security against the perils which surround them, cannot be treated with disregard or contempt. We believe that the Act under which the present limited number of Coal Mine Inspectors were appointed is likely soon to expire, and feeling that it did not include, or even contemplate, the iron and other metalliferous mines, we can scarcely bring ourselves to believe that the Government will so insult the country as to content itself with a mere renewal of the existing Act, merely to legalise the payment of their future salaries to the present possessors.

The expression of national disapprobation is very general with regard to the working of our representative system; and although the indignation of the British people has been peculiarly roused by, and is especially directed to, the misconduct of the war, and a change in our administrative arrangements is evidently impending, it may be boldly asserted that there does not exist in the community any class with respect to whom legislative apathy has been more marked, or more discredited, than the coal mining population of Great Britain.

In our Journal of the 14th April we noticed at some length a case of much interest, *BRIGGS v. NETHERWOOD*, relating to a colliery accident, which had been heard before Mr. R. G. TEMPLE, the judge of the County Court of the Hanley district. We submitted to our readers a succinct but accurate detail of the facts and arguments, and stated that the judgment of the Court was postponed, in order that it might receive very deliberate consideration. We are now enabled to present to the public a report of that judgment, to which we direct the marked attention of all parties interested in the management of mines:—

His Honour said that the particulars in this case stated, "this action was brought to recover 50*l.* by way of damages for injuries inflicted on the plaintiff, at Tunstall Hill Colliery, Staffordshire, in the month of November, 1854, through the gross carelessness and negligence of the defendant, in working, using, and managing certain machinery belonging to the defendant, and then under his care, control, management, and direction." The plaintiff was a working collier, and the injury was sustained by him when descending a coal-pit, with gunpowder and straw, for the purpose of blasting, on the 23rd of November. When within about 15 yards of the bottom, he was suspended for about a quarter of an hour, and then suddenly was hoisted up the shaft, and thrown out at the top with great violence, and his skull was fractured. It was contended, on behalf of the defendant, that under this head no evidence of insufficient or improper machinery could be given; that the condition of the machinery could not be questioned; but that the evidence must be confined to the negligence or carelessness of servants using the machinery—in other words, to the manner of using it. On the trial, I refused so to confine the enquiry; and, upon further consideration, I am confirmed in that holding. I think the defendant is guilty of negligence and carelessness in using machinery, if he is shown to use insufficient, improper, or dangerous machinery; and that the insufficient and dangerous quality of the machinery is, therefore, sufficiently pointed at in this particular; and I should be unwilling to apply special pleading refinements to proceedings in this Court. However, the evidence in this case was not confined simply to the insufficiency of the machinery, but applied also to the manner of using it—to the want of care in using proper correctives in the use of it—in not having used a break to control it, with regard to the use of which break a material question arose—whether or not using such break amounted to such negligence? Upon a careful consideration of this case, and of the evidence adduced on both sides, I have no doubt that the steam-engine, as worked by the boiler which generated the steam-power, was very far from being safe to the lives of men who had to go up and down these coal pits, and that the not using a break to the engine was not only a want of proper care and caution in the use of that engine, but that the defendant was aware of such deficiency; which was evidenced to my satisfaction, by his enquiring from Goodwin as to the want of such break; but even if the defendant had no such apprehension he will be liable, if I am satisfied that the boiler was not a safe one to be used; and if I am satisfied that the using such engine without a break was dangerous to the lives of the workmen; and that a break was what ought to have been used in due and ordinary care and caution; and upon these points I have no doubt, upon the most satisfactory evidence of Mr. WYNE, the Government Inspector. The next question for my consideration was, whether the plaintiff was precluded from seeking damages for this injury because, at the time, his own rashness and misconduct in acting in violation of the rules of the colliery, conducted to such injury. How far the acting in violation of these rules by the plaintiff would exonerate the defendant from his liability in using defective machinery, or in the improper manner of using it, or negligence of conduct in working the machinery, might be a very nice and difficult question; if I were satisfied that those rules had been fixed upon the pit, or that the plaintiff had violated them; but, upon the evidence, I am not satisfied that the rules of the colliery were brought home to the plaintiff, nor do I think that sufficient steps were proved to have been taken to promulgate those rules, so as to make them binding on the plaintiff. On the contrary, I am satisfied that he was not present when they were read over, and that no sufficient means were resorted to to make me think that he had any knowledge of them. And, moreover, I am satisfied that he went for the powder and straw with the sanction and permission, if not by the actual direction, of the dozy, or underlooker. I am, on the whole, clearly satisfied that the boiler was dangerous; and that so to use the steam-engine by means of such boiler, and without a break, was gross negligence on the part of the defendant, the proprietor of this colliery; and that, therefore, the plaintiff is entitled to recover from him damages for the injuries sustained in consequence of such negligence. The remaining question is the amount of such damages. There can be no doubt that this has been a most serious injury—fatal in its nature and consequence: the fracture of the skull—the affection on the brain and eyesight—still doubtful how far it may be permanent, so far as to disable the man from safely following his calling as a collier. I was sorry at the attempt to introduce into this case a reflection upon the conduct of the plaintiff since the accident—in the way of imputance. I think such evidence entirely failed; and, upon the whole, I think the plaintiff fully entitled to the amount claimed—viz. 50*l.* I hope, after the evidence which was given in this case by the Government Inspector, that the general want of care and caution, in the not using of breaks, in this important district, where so many lives are at stake, will cease. It should be known that the generality of negligence, in such respect, will not exonerate—much less justify—individuals; but that, as the Lord Chancellor, in the House of Lords, in the case of *Patterson v. Wallace*, declared, "The law of England demands, that where a master is employing a servant in a work—particularly work of a dangerous character—he is bound to take all possible precautions that there shall be no extraordinary danger incurred by the workman."

The importance of this decision, both to proprietors, managers, and workmen in coal mines, cannot be overrated. It, however, only affirms the propositions of law so emphatically laid down during the last session of Parliament by the House of Lords, in the Scottish appeal case of *Patterson v. Wallace*, to which we have repeatedly directed attention. We believe that this is the first instance in which the legal doctrine established as settled law in that case has been practically enforced in favour of an injured party, and it must have a salutary effect in exciting caution, and leading to prudent arrangements by the proprietors and managers of mines, to ensure safety and protection for the lives and limbs of those whom they employ.

The attention which Dr. SMITH's proposed plan for utilising the slags of our mineral furnaces, now in use in the United States, has attracted in this country indicates the liberal spirit with which every novel project is received. It is due to that scientific gentleman to acknowledge that he did not claim the merit of exclusive originality for the system which he proposes to introduce, and it is but an act of justice to one of our own countrymen, to remind the British public that the matter had been, so far back as the year 1848, submitted to them by a spirited individual, Mr. T. TWING, jun., in a valuable paper "On Pyrolite, or Artificial Lava."

Mr. TWING followed up the subject by offering, in the Prize List of the Society of Arts for the year 1849, a prize of fifty guineas "for the best series of experimental researches on, and specimens of, the application of slag, or other allied products, to new purposes, useful or ornamental." Those who feel interested in the enquiry, will find the subject fully noticed in our Journal of the 4th Nov., 1848, and it was there announced that the object of Mr. TWING in publishing his own researches and experimental labours, was simply to insure to the production of pyrolite a full scientific and practical development, and to the public a free participation in its advantages, without seeking any personal benefit from the results which might arise. Perhaps to the very disinterested and patriotic motives of Mr. TWING, thus expressed, may be traced the silence in which the project has been permitted to rest; but if a question should be raised as to the originality of the invention, or of its proposed uses, his claims cannot be disregarded. We were then assured in the paper of Mr. TWING, that the tedious leisure of twenty years' illness had favoured the conception, but had, unfortunately, prevented the completion of his favourite plan of forming a comprehensive system of petreous substances which, while in a state of fusion, could be cast into required forms, thus obviating that labour and expense necessarily incurred in hewing and fashioning natural materials by mechanical means.

A peculiar system of classification was adopted, the first series comprising cheap useful, though, perhaps, inelegant, modifications of the known varieties of common slag, under several varieties, to which he proposed to add another, which he termed spongy pyrolite; a coating calculated both to improve the external appearance, and to protect against the effects of atmospheric exposure. The second series consisted of genuine pyrolite, under several classes—namely, first, the metalliferous, the main material for the formation of which would be metallic ore, the fusion to be effected with the assistance of appropriate fluxes. In the second series, silica and alumina were intended to be important constituents, while the metallic oxides would be restricted to colouring purposes. The third was termed variegated, or veined pyrolite, to be formed by mixing together in a state of fusion differently coloured varieties, or by mixing with them metallic or other appropriate substances, likewise in a state of fusion. By these means such elegant combinations of brilliant colouring might be produced as would enhance the value of the products of this series for numerous purposes in the decorative arts, connected with internal architecture and domestic refinement. Excellent types for imitation were presented by many well-known marbles; while more select and more carefully prepared materials would emulate the veined agate, the Egyptian poble, the onyx, and the malachite, assuming at once, under the plastic power of fusing, those forms which cost the lapidary so much time and labour to produce.

What was termed the composite, or Heteromeric pyrolite, furnished another class, to be formed by introducing into a molten mass of any of the preceding materials, comminuted particles, fragments, or variously-shaped

pieces of extraneous substances in a solid state. The last of the series was the crystalline pyrolite, presenting crystals somewhat resembling pyrozone, found in some kinds of slag—for instance, in that of the copper furnaces at Swansea. Under this head, Mr. TWING alluded to the results of ingenious experiments made some years previously at Edinburgh, which proved that a molten mass of an appropriate nature, if allowed to cool very slowly, will exhibit a marked tendency to that crystalline structure seen in rocks of igneous formation, especially if such gradual cooling be accompanied by a considerable amount of pressure.

The paper of Mr. TWING also referred to two other substances; the first he termed "lava dips," which consisted in the immersion of a porous substance, already moulded into its intended form in a well liquified mass of pyrolite, or other similar suitable material, by which it would be penetrated to a certain depth. Such a coating might be a great improvement to blocks of spongy pyrolite, and the impregnation would form, when concreted, a compact external layer, or crust, combining any requisite degree of solidity, weatherproof texture, and ornamental appearance; the surface, too, might afterwards be rubbed with sand to destroy the vitreous gloss. The other substance was termed "igneous agglomerate," to be formed by mixing, in a cold state, materials of various degrees of fusibility, and subsequently applying a degree of heat which, by the fusion, or semi-fusion of the more fusible particles, would make them seem to bind and cement together with more refractory ones. While Mr. TWING candidly acknowledges that the various species of artificial stone manufactured in England hemmed in his scheme rather closely on all sides, he believed that sufficient space still remained for developing its utility in various ways and aspects.

In thus recalling to the public recollection the various phases of the plan proposed by Mr. TWING, we render but an act of simple justice to that enlightened and disinterested projector. The claims put forward by Dr. SMITH do not, however, conflict with the earlier scientific researches, or practical suggestions of his immediate predecessor in his interesting and important field of enquiry. We believe it will be found that the pretensions of both are, at least to a certain extent, reconcilable; and that while Mr. TWING is entitled to the palm for theoretical and even experimental priority, Dr. SMITH may maintain the claim which he asserts of being the first who really applied the refuse slag of metallic furnaces to purposes of commercial utility.

The death of that distinguished geologist, Sir HENRY DE LA BECHE, has necessarily created a vacancy in the important department connected with the science of mining over which he presided. The School of Economic Geology, of which he was the projector and the founder, was just commencing to assume a national importance, and to direct public attention to the vast advantages it presented for scientific and practical education, when an attack of paralysis suddenly closed his earthly career. His connection with the Geological Survey has secured to him an imperishable name, which will be long remembered in the mineral districts of Great Britain; while the European repute which he acquired by his devotion to the science will operate as a salutary example to the rising generation. Under his direction was established not only the Geological Museum, but also the office of Mining Records, which promises, under the admirable administrative arrangements of Mr. ROBERT HUNT, F.R.S., to prove of such inestimable value, not only in unfolding our present mineral resources, but also in guiding to their future more extended development. We know not any modern institution, amongst the many dedicated by the nation to industrial or educational purposes, which reflects more credit on the foresight and intelligence of those by whom it was devised, or which more fully justified the selection of those to whom the arrangements were confided. We believe we are correct in stating that the appointment, recently held by Sir HENRY DE LA BECHE, has been offered by the Government to Sir RODERICK I. MURCHISON, F.R.S.: we are not, however, in a position to announce his acceptance of the duties. Should he decline, which, we are informed, is extremely probable, we may perhaps venture to predict that he shall recognise in Professor PHILLIPS, the eminent geologist, a worthy successor to Sir HENRY DE LA BECHE; and we anticipate that the high character which the Central National School of Geology and Mines was daily acquiring will be fully sustained under its future management.

The measure about to be considered and discussed, by the introduction of a Bill into the House of Commons for rating the metalliferous mines of Cornwall and Devon to the poor's rate, is one of such vast importance, not only to the best interests of those counties, but to the very existence of an industrial, hardy, and contended population, dependent on this staple produce for their support, that we sincerely recommend the perusal of a communication on the subject, from Mr. WILLIAM TREBART, which will be found in another column. It is a measure which appears to us fraught with injustice, and against which many tangible arguments may be urged; however, we shall make some remarks in our next Journal, and in the mean time we shall be happy to receive, from such of our readers who have had experience in the working of mineral property, and its influence on parochial finances, their opinions on this all-important question, which, if its promoters succeed, must affect every mineral district in the kingdom.

The affairs of the NATIONAL BRAZILIAN MINING ASSOCIATION, which have been so prominently noticed in our columns during the past 10 or 12 years, throughout which period the workings on this undoubtedly valuable property have been productive of so much disappointment, anxiety to the direction, and alienation of confidence on the part of a large portion of shareholders, is now, we trust, on the point of being placed in a course of arrangement satisfactory to all parties. In the VICE-CHANCELLOR'S Court, yesterday week, a case, arising out of these affairs, came on for hearing, in which Mr. SHEPPARD, a shareholder, was plaintiff, and Mr. EDWARD OXFORD, sole surviving director, defendant. The principal facts were, that in 1828, the company, of which defendant was chief promoter, was formed, for the purpose of carrying on mining operations in Brazil. The capital was originally fixed at 125,000*l.*, in 5000 shares, of 25*l.* each, but from time to time had been increased to 300,000*l.* No deed of Settlement had ever been executed, and plaintiff held 250 scrip certificates as his interest in the association. In 1848, defendant and Mr. HAMILTON were appointed directors and trustees, and the whole of the property was vested in them on behalf of the association, against which they had large claims for money advanced; and in 1853, after the death of Mr. HAMILTON, defendant acted as sole trustee, and claimed from the association 33,000*l.* Proposals for a settlement of these claims were made, details of which have appeared in our columns; but plaintiff had filed a bill on behalf of himself and other shareholders, except defendant, and now sought an injunction to restrain defendant from selling, or otherwise disposing of, or dealing with, the property, and to appoint a proper receiver. Defendant had left England for the Brazil. Mr. ROZE and Mr. BAGGALLY, in support of the motion, said they did not wish to interfere with Mr. OXFORD in his management of the mines, but to obtain for the shareholders some control, to have the liabilities exactly defined, reserving the rights of defendant to be paid out of the proceeds. There was no wish to wind-up, as the property was expected to prove valuable, and capital for working could be easily found. Mr. DANIEL and Mr. TOLLER opposed. The suit was improper in frame, and the plaintiff merely a derivative shareholder, and had not sufficient *status* to sustain this litigation. Defendant was entitled to retain the property until his claim was discharged. On Saturday the VICE-CHANCELLOR gave judgment; after remarking on the extraordinary circumstances of the association, and the peculiar position of the property, and animadverting on the steps Mr. OXFORD had taken in leaving for Brazil on the 7th inst., when he knew a meeting was fixed for the 9th, an order was made to restrain defendant from selling, or otherwise disposing of the property, except in the ordinary course of business—to appoint a receiver and manager of the business in this country, to discharge existing and future liabilities. There was no objection to let the slaves to hire, provided the proceeds were remitted to this country.

On Tuesday, the case came before the Court on a demurrer to the bill put in by the defendant. The VICE-CHANCELLOR having decided that it was open for defendant to proceed, although he considered the course inconvenient, Mr. DANIEL said the decision upon the motion was one which his client felt would be very prejudicial to the interests of the association, as it restrained the sale of any part of the property except in the ordinary course of business, and would, therefore, prevent the disposal of any of the negroes upon the estate, of whom there was a great overplus; and at present there existed a favourable opportunity for their disposal, which might not occur again. If the demurrer succeeded, the order on the mo-

tion would fall to the ground, and he was most anxious to proceed. He was, however, willing that the demurrer should be heard before the Lords Justices, at the same time that the appeal against the order upon the motion was heard. The Court considered this the most convenient course, and the matter was so arranged.

It is sincerely to be hoped that this decision of a court of equity will not cause further misunderstandings, or lead to protracted litigation. Mr. OXFORD has for many years been advancing large sums of money to preserve the interests of the association; indeed, had it not been for his persevering support, the property would long since have reverted to the original proprietors, and the whole of the expended capital been for ever lost. A sale of the property, under any circumstances, more particularly with the present uninviting and depressed state of foreign adventure, cannot be effected but at a vast sacrifice; while, if capital can be so easily raised, as stated by plaintiff's counsel, among the existing proprietors, the salvation of the association and the property may be effected. Mr. OXFORD requires only the repayment of what he has expended, and what is justly his due. He has more than once made honourable and liberal offers to sell a portion of the assets, sufficient to pay the debts, and to hand over the remainder to nominees—to sell the whole, pay off debts, and divide the residue *pro rata*: but these offers have never been responded to, and, consequently, no progress has been made.

The question now arises, what shall be done to secure the best results? Mr. OXFORD is most probably now on the property, a report from whom as to its position, and the state of its auriferous and other mineral deposits, may shortly be expected? He will most probably also make some suggestions for the beneficial guidance of his co-proprietors here. Under these circumstances, we think it would be desirable to lay upon their ears until such communication arrives—immediately to call a public meeting of the scripholders, make arrangements for raising sufficient capital for paying off the liabilities, producing a working capital, and deciding on the best mode of proceeding for the future development of the mines. Unfortunately, at the commencement of the association no Deed of Settlement was executed; proprietors are holders of scrip, and it is impossible to find them all, to give the necessary notices. All can, however, read public advertisements; hitherto there has been too much hanging back to watch the course of events, and take advantage of results; and those who will not put their shoulder to the wheel for the resuscitation of the life of the association should be excluded from participation in any advantages which may hereafter arise.

Mr. JOHN TAYLOR has just visited the LACKAMORE MINE, and has reported to the committee that his opinion of the mine is very favourable; but he has expressed his regret and disappointment at the dilapidated state of the machinery and buildings, and small progress which has been made towards bringing the mine into a proper state of working. He has recommended that steps should be taken for the complete drainage of the mine, and that a more powerful water-wheel should at once be purchased for that object. He does not estimate that any material assistance can be derived from returns obtained, as they are at present from the old workings, above the 10 ft. level, and recommends that a general meeting of shareholders should be called, as soon as the accounts to the 30th June next are closed, to decide upon the measures necessary for the further prosecution of the mine.

The complaints respecting the inferior quality of recently-manufactured rails, naturally attributable to the attempts made by companies to reduce the price, have attracted attention both in this country and in the United States, and have led to some practical and scientific enquiries. On the first introduction of railroads, it was confidently asserted by their promoters that the rails would last for indefinite periods, but experience soon demonstrated that railway bars were subject to lamination and disintegration, from the repeated rolling of heavy loads. Their duration, in some instances, has not exceeded two or three years; and in some of the earliest constructed lines in England the rails have been changed twice, or even three times, since their opening. Opportunities have, accordingly, presented themselves to the engineers on these lines, of ascertaining the actual powers of endurance of iron rails, and of calculating the amount and extent of traffic which they are capable of withstanding under the varied circumstances to which they are exposed. Where the conditions are favourable, and the bars themselves perfectly sound, it is believed that the traffic which rails of ordinary quality are capable of bearing will not fall very short of 20,000,000 tons. The rails laid down on many of our railways have not, however, carried one-fourth of this traffic; and large quantities have been, in some instances, renewed which have not borne a tenth of that weight. Well-recorded observations on this subject are much to be desired, and would prove of the greatest benefit, not only to railroad companies and their shareholders, but also to engineers, and even to the iron trade in general. In directing attention to the subject, we need not remind the public that this Journal is at the service of those who are enabled to furnish scientific or practical information in reference to it.

A paper has appeared in a recent number of the *Journal of the Franklin Institute*, of Pennsylvania, "On the Durability of Railroad Iron," by Mr. WILLIAM TRURAN, in which the question has been partially discussed, and some details supplied respecting the wear and tear of rails on some railways. Much of the information thus collected has from time to time appeared in the columns of this Journal, and, although of value in a concentrated form, cannot be new to the scientific or practical English engineer. It is observable, however, that the paper is confined to some local lines, and does not refer to the great trunk railways of this country. They are, of course, the lines from which general deductions can be most safely derived, and in which the most perfect means exist of recording full and accurate information. Mr. TRURAN has drawn certain conclusions, from the limited examples which he has been enabled to give, of the duration of railway rails under different conditions of laying and working; and he remarks, that in every instance wherein the construction of the permanent waysolidity had not been obtained by the employment of adequate sleepers, the destruction of rails had been most rapid. The greater duration, on the other hand, may be attributed to the use of heavy rails, to the wagons and carriages having bearing-springs, and to a well constructed and carefully maintained permanent way. Favourable instances of durability have been found to arise from favourable grades, but the absence of bearing-springs has been found to have a prejudicial effect on rails, and to have greatly lessened their duration. When the quality of the metal used has been inferior, and the nature of the fastening employed defective, unfavourable results might be naturally expected. It has, we are informed, been found in practice that the cost of labour and materials, in supplying and replacing unsound bars, and the ultimate expenses incidental to the entire renewal of the rails, of course irrespective of their first cost, is generally equivalent to the value of the old metal obtained. It is obvious that this investigation opens a field of curious and interesting enquiry, and our specially directing attention to it may, perhaps, lead to more perfect arrangements for the collection of future materials.

Every advance in the manufacture of rails is a matter of national importance, and we feel proud to acknowledge that Wales is taking the lead in practical improvement. The heaviest rail ever made has been manufactured at the Rhymney Works, Monmouthshire—a Barlow rail, 52 feet 6 inches in length, 90 lbs. to the yard, being a total weight of 1575 lbs. The longest rail ever made, a double-headed rail, 60 feet long, 75 lbs. to the yard, total weight 1500 lbs., has just been manufactured at Tredegar Works, also in Monmouthshire. It is difficult to decide which ought to bear the palm, the Rhymney rail being 1-20th heavier than the Tredegar rail, and the Tredegar rail being 1-7th longer than the Rhymney rail; but it must be remembered that a double-headed rail is more difficult to be manufactured than a Barlow rail. The reduction of duty on rails imported from this country into France, while illustrating the enlightened policy of the French Emperor, has given fresh impetus to the manufacture in England; and we believe this country is likely still to maintain her superiority. We cannot conclude without recording the public spirit evinced by the workmen at Tredegar, who, having finished their week's work (about 700 tons of rails), on learning that it was contemplated to make a long rail, volunteered, without remuneration, to manufacture the longest rail in the world. The rail was accordingly wrought, and heated in one of the ordinary furnaces, and, after a week's toil, was finished by the gratuitous labour of the workmen, whose independence thus sought to maintain the pre-eminence of their country.

MINING ACCIDENTS.—Five lives were lost by an explosion of fire-damp at Mr. Williams's Ynys-Cynon Colliery, Aberaman. A miner, named Merrifield, was killed by a premature explosion at the Baleswidon Mine. Two miners, named Jones (brothers) were badly injured, by a swing stage giving way in the Dolowath Mine.

THE IRON AND METAL TRADES OF SOUTH STAFFORDSHIRE.

(FROM OUR CORRESPONDENT IN BIRMINGHAM.)

APRIL 26.—The reports from all parts of the district this week are very unsatisfactory; in homely phraseology, things seem going from bad to worse, and apparently with very little prospect of immediate amendment. It is not at all times easy to procure accurate information relative to the actual state of the staple trade, extending, as it does, over a district of so many miles, and in which are involved such a variety of interests. Circumstances, however, have occurred which have called forth from the leading ironmasters such explanations respecting the real state of the trade as exhibit it in a very unsatisfactory light. Owing to the recent extensive strike amongst the men, and which, I am sorry, is still partially carried on in some localities, it was deemed necessary that a number of the ironmasters should receive a deputation from the operatives on Friday last, with the view of adjusting the difference existing between them, arising out of the proposed reduction of wages. The conference took place on the above day, and was attended by the representatives of some of the largest firms in the trade, including Messrs. S. H. Blackwell, of Dudley; Michael Grazebrook, of Audnam; George Thompson, of the New British Iron Company; Mr. Smith Bond, Mr. George Holcroft, and Mr. E. Gould; Mr. Wm. Matthews, of the Corby's Hall Ironworks; Mr. J. E. Swindell, of Cradley, &c. William Orme Foster, Esq., of Stourton Castle, having been called to the chair, Mr. Blackwell and Mr. Matthews entered into explanations justifying the proposed reduction on the part of the masters. From the observations of the former gentleman, it appeared that out of one hundred and forty-four furnaces which were in blast at the commencement of this year, not less than upwards of fifty have been blown out, and others are certain ere long to be added to the list. Pig-iron, which six months ago realised 5*l.* 10*s.* per ton, is now selling at 2*l.* 15*s.*, and not one half the quantity of the former consumption at that reduced price is being sold. Manufactured iron, which was sold at 12*l.* per ton, is now eagerly disposed of at from 7*l.* 10*s.* to 8*l.* per ton. Mills and forges throughout the district have been stopped, or are only partially worked. These details were fully corroborated by Mr. Matthews and several other gentlemen, whose combined testimony went to establish the unfortunate necessity which exists for reducing the wages of the men, in order to enable the masters to meet the severe pressure which the decline of trade and reduced prices have imposed upon them. The men, impressed with the conviction of the necessity of submitting to a reduction, assented to the proposal, and, on Monday last, many of them resumed their work. Some few are still reported out, but the great majority of the hands have returned to the pits, and no doubt will be only too glad to find constant employment on the new terms. In this, however, it is to be feared they will be disappointed; few, if any, additional orders have been received during the past week, and the general depression occasioned by the failure of our negotiations at Vienna, the unsatisfactory intelligence from the seat of war, and what is now considered inevitable, the upset of the present ministry, has been felt throughout our entire commercial circle to a serious extent.

As a consequence of the state of the main trade, several branches of manufacture more immediately connected with it, including, amongst others, the Hollow Iron Trade, are depressed, and the men, at most of the works, are on short time.

At Darlaston and Willenhall, &c., the Lock and Hinge Trades are exceedingly dull, and reduced lists have been sent out.

At Walsall there has been, during the week, rather a revival of the Saddlers' Ironmongery Trade.

The general Factoring Trade of Wolverhampton is inactive, and prices generally rather receding.

Of the general trade of Birmingham the report cannot be more satisfactory. Many mechanics have been reduced to short time, and the parochial returns exhibit a very decided increase in pauperism. The applicants for out-door relief are weekly increasing, and there are in the workhouse about 400 inmates more than were in the house this time last year. The partial stoppage of the ordinary demand for manufactured goods affords the manufacturers additional opportunity of preparing for the Paris Exhibition, and to those already noticed in the *Mining Journal* may be added the following: Messrs. Cartwright, Hiron, and Woodward, of Great Charles-street, electro-platers, have prepared some splendid specimens of their manufacture. Messrs. Prince and Son, of Northwood, manufacturers of dessert knives and forks, &c., have also contributed largely to the Exhibition; and the same may be said of Messrs. Allen and Moore, medallists, who have prepared a case of their manufactures, including lamps, inkstands, papier-mache goods, fancy boxes, &c.

The following has been patented, through Mr. Shaw's office, during the week:—Mr. George Savage, of Adderbury, Oxfordshire, has just patented a new or improved lamp for singeing horses, constructed in the following manner. The body of the lamp consists of a flat, or wedge-shaped vessel, divided by a partition into two compartments or chambers, one of the chambers holding the wick, and the other constituting the reservoir for holding the wood naphtha to be supplied to the wick. The handle of the lamp is hollow, and opens by a forked end into the reservoir containing the wood naphtha, or other combustible liquid to be burned in the lamp. When it is wished to open a communication between the wick chamber and the reservoir containing the combustible liquid to be burned, a stop-cock, which communicates between the two chambers, is turned, and the wick chamber filled with naphtha. The stop-cock is now closed, and the wick may be ignited. Portions of naphtha are allowed from time to time to enter the wick chamber by the turning the stop-cock, and inclining the lamp into a nearly horizontal position. When it is wished to fill the reservoir and handle of the lamp with naphtha, a cap is unscrewed from the bottom of the handle, and the lamp inverted so as to bring the lower end of the handle uppermost; when the lamp is in this position the chamber and handle may be filled with naphtha.

IRON AND COAL TRADES OF YORKSHIRE AND DERBYSHIRE.

(FROM OUR CORRESPONDENT IN CHESTERFIELD.)

APRIL 27.—There has been no movement in the iron trade during the week which would lead to the conclusion that business was improving. Everything is very much depressed, but the prospects of the trade now are far better than they were a month ago. The dissolution of the Peace Conference, and the possibility of a protracted war, are affecting all commercial transactions both at home and abroad; and, according to the last advices from America, it would appear that a similar state of things exists there as in England, with respect to trade generally, so that we cannot look hopefully to the states of America for an increased trade.

The Steel and Cutlery Trades at Sheffield are dull, and the same may be said of the Hardware business generally.

There is nothing new to notice in the Coal Trade. The extreme dullness which has existed for some time past continues to prevail.

The elevation of many a family in this commercial nation, where a humble individual is suddenly exalted from a dependent state to one of wealth, although sometimes caused by intestacy, or by a lapse of near and direct heirs, is often caused by enterprise; and so far as the High Peak of the county of Derby is concerned, the founders of many of the leading families of that district owed their change of fortune to some acquaintance with the geological peculiarities of the Peak, and to persistent miner-like course of action in carrying out their views respecting the means most adapted to the end—the early development of its mineral resources. Numerous are the instances of families in that district who date their exaltation to a course of successful mining in the Peak. Persuading in their efforts, they followed the object of their research to the water; and for more than a century the locality waited for the genius of Watt, as exemplified in the application of steam power. And strange as it may appear, mines, in that special district, from that day, have never had relief until within the last few years, and even then, in many instances, it was brought to pass by mere trivial or accidental circumstances, and in a neighbourhood comparatively poor, without foreign aid to any considerable extent; for during the great mining mania—while all the world had its prospectuses—that district trusted to its resources, and never issued one, not even to this moment; and yet it progresses and continually prospers; and during the last few years, and even months, we have had completely restored to their original glory several of these primitive mines. In this class the Eyam Mines are not the least to be regarded; and although the best part of their sett—the Magelough—is yet unopened, by the assistance of a ten-horse engine only they have recovered a vast amount of treasure, and paid 100 per cent. on their outlay on their mine, the Dusty Pit. So, also, the Brightside, which was abandoned for an age; but, by the erection of a 25-horse engine, it is now employing numerous hands, and returning its dividends every six weeks or three months. The

last dressing of ore at this mine, amounting to about 88 tons, has just been sold for 1300*l.*, being an excess of several tons upon our extremest calculation. In this category we might name a number of mines; but perhaps the most remarkable fact occurred a few weeks ago, at a point where the properties of the Gisborne's and the Jodderill's join in the Peak. The family of Gisborne had been realising great wealth by their continual dressings of lead ore, and a strong suspicion entered the mind of the agent of the Jodderill's that probably the compass used by Mr. Gisborne's agent might not work very correctly, and consequently he sank a shaft on his master's property, only at a few pounds expense, and in doing so raised many hundreds of pounds worth of ore, and at the same time discovered that the agent of Mr. Gisborne had pursued the precious metal quite as far as he would be welcome; but as a considerable amount of iron existing there would prevent the working of the compass, no doubt very innocently. In a short time we shall refer to the Wren Park and Calver Sough Mines, in this district, and may conclude our remarks by observing that we believe to Mr. Thomas Broomhead, the High Peak mineralogist, a great deal of the prosperity of the district is to be attributed, inasmuch as he originally influenced several of his adventurous fellow-countrymen to carry out his pre-conceived opinions of the importance and probable successful issue of legitimate and honest mining adventure in the Peak; and we are glad to behold so happy an issue of honest endeavours, for the peasant is employed, the capitalist remunerated, and no soldiers either to be had or required. The motive must, undoubtedly, be very patriotic that can induce these limestone miners to exchange 3*s.* per day, and sometimes 2*l.* per week, for 1*s.* 1*d.* per diem. We believe they will go on hammering still, unless they should happen to hear that the dominant party are prepared to provide for their own, instead of foisting the same on the public, irrespective of merit or fitness, under the garb and on monopoly of commissions in the army, to the injury of the public character and service. In other words, the Second Derbyshire Rifle Militia may wait till doomsday ere it has its complement at 1*s.* 1*d.* per day from a class of men earning, and worth, 3*s.*; unless, indeed, true English courage and conduct be properly appreciated, and commissions attainable by merit. So long as the enemy keeps from the cliffs of Dover, our brave miners are not in much danger of exchanging their tick cost for jackets of blue or red, be they ever so attractively officered.

At the Sheffield Court of Bankruptcy on Saturday last, Mr. Samuel Plimself, coal merchant, of Sheffield and London, came up for his certificate. His assets were about 1833*l.*, and his total liabilities only amounted to about 2600*l.*. The fact was, the bankrupt had been ruined by the conduct of the railway companies, who gave him notice that his trucks would not be allowed to travel upon their lines. Mr. Commissioner West asked if they had a right to give such a notice to parties?—Mr. Hoole said the railway companies did not hesitate at what they had a right to do. What could an individual do against a powerful company?—Mr. Commissioner West said it was doing away with competition when a company said to any person, "You shan't go along this line."—Mr. Hoole, for the bankrupt, said the bankrupt commenced business on the understanding that he should be allowed to take his coal traffic on the London and North Western and Great Northern lines; but the companies afterwards changed their policy. His trucks were detained eleven weeks, and ultimately he had notice to suspend business altogether. Mr. Hoole read an extract from the *Mining Journal*, showing the injurious effects of railway companies attempting to monopolise traffic, and went on to say that he did not see how the bankrupt could have stopped sooner. He had notice to take his trucks off the line, and this completely paralysed his business. There was also a sudden fall in the price of coal, which had an unfortunate effect upon the affairs of the bankrupt, who closed his accounts as soon as he saw that there was no chance of retrieving his affairs. Considering all the circumstances—the bankrupt being a young man, and the assets being considerable—he hoped his honour would grant a certificate of the first class.—His Honour, in granting the certificate, said the bankrupt had been stopped in his legitimate traffic; and, if the facts had been correctly stated, he ought not to have been stopped as he had been. He disliked making observations as to the conduct of bodies like railway companies, but he must say that such a course as had been pursued in the present instance seemed calculated to prove disadvantageous to the public, and eventually to the companies themselves. He could not help thinking that the bankrupt's conduct was not to be found fault with, considering that he had been stopped in his business, and also that he had suffered from a fall in the price of coal. He considered the bankrupt entitled to a certificate of the first class.

The sinkers employed at the Land Hill colliery have arrived at the Barneley bed of coal, which is 8 ft. thick, and of excellent quality. The shaft from the surface of the mine to the coal is 220 yards deep. The colliery is the property of Messrs. William Taylor and Co.

COLLIERY ACCIDENTS.

Comparative results of mine inspection for the counties of Durham, Northumberland, and Cumberland, taking the quarter ending 31st March; and the average of former half-years since the passing of the Act:—

	Quar. end. Mar. 31.	Proportion for half-year.	Aver. of former half-years.
Accidents in shafts	—	—	13
Explosions	2	4	16
Choke-damp	—	—	4
Falls of stone and coal	8	16	23
Sundries	17	34	22
Total	27	54	74

MINES AND MINING—No. XII.

BY EVAN HOPKINS, C.E., F.R.S.

Attempts are being made to attribute the great losses incurred in mining speculations to the ignorance of our mining agents, and that were they more enlightened in scientific matters such losses would not take place. I trust the English community have quite sufficient common sense to know that the above is not the fact, and that the object of such attempts is to draw the public attention away from those who have been, and still are, the real cause of the deceptions and losses which have injured and degraded our mining speculations, and rendered them more dangerous, and infinitely worse, than ordinary gambling to the uninitiated. Besides, were we to make comparisons between the reports and results of the so-called ignorant mining agents, and those called scientific men, we should find that the latter, in connection with speculative persons, have caused much more serious losses and lowered our character, in judgment and integrity, far more than anything which has occurred from the ignorance of our practical agents.

I freely admit that our miners labour under great disadvantages for the want of better scientific training, and that they ought to be able to acquire better education, and be better acquainted with the science of mineralogy, &c.; it is to be hoped that good and suitable industrial schools will soon be established in all the mining districts, where the labouring classes may receive the scientific knowledge required to aid them in their daily avocations. I admit, also, that many mistakes have been committed by mining agents in taking tungsten or iron for the oxide of tin; the green phosphate of iron for copper, &c.; but I maintain that these errors are nothing compared to the losses and evils which have resulted from the reports of the mere scientific men. Look at the gold schemes, from their commencement in 1851. Who wrote the reports on the prospects of the Californian gold quartz companies, founded merely on specimens, specific gravities, assays, &c.? Who made the reports on the value of the new gold extracting machines, taking out upwards of 95 per cent. of gold in the first operation, frequently leaving no gold in the residue, and bringing out all but pure gold besides? Who have been the cause of starting those English gold mining companies in various parts of the United Kingdom, which have caused so much loss, recrimination, and derision?

Surely these and many other schemes, &c., that could be named, have not been brought forward by the practical mining agents, nor from want of scientific training amongst our mining population. They have all proceeded from speculators, and the so-called scientific men. It is the abuse of science, the want of sound practical knowledge, a defective and selfish system—jobbery—the want of discretion on the part of the public to select the right men for the right place, and their omitting to see that their general interest is attended to, which are the causes of so many deceptive schemes and so much loss in mining speculations. The term scientific, instead of being considered as a signification of attainment, and commanding respect, is becoming a term of reproach and distrust. This arises from the want of attending to the importance of the division of labour, which has rendered our other industrial enterprises so prosperous.

In our railway speculations, the engineers and contractors are not al-

lowed to be interfered with by speculative jobbers. Our manufacturers will not permit mere theorists and speculators to disturb the welfare of their operations. Our merchants would not countenance, for one moment, any attempt on the part of a presumptuous pursuer to interfere with the captain's duties on board a ship; hence the reason of our general success in such matters. But when we come to mining speculations, and other enterprises connected therewith, more especially the foreign speculations, the selection of proper persons for their respective posts is not only totally neglected, but, if possible, carefully avoided. In fact, to be a manager of a public company, it matters little what may be the capability of the individual, or his previous occupation; all that is required of him is to obey the dictates of those who placed him at his post, to write what he is told and to make a plausible report for meetings.

QUARTZ MINING IN CALIFORNIA.

Pending a settlement of the affairs of the Quartz Rock Mariposa Gold Mining Company, Mr. Waddell, the secretary, has taken advantage of an opportunity to visit the northern mines of California, for the purpose of inspecting the quartz mills in actual operation, to ascertain the system of machinery best adapted for amalgamation, and to obtain drawings necessary to complete the works of the company, as proposed by Mr. J. A. Phillips; and the following "Report on the Quartz Mines in Grass Valley and Nevada, California," is the result of his investigations:—

THE AGUA FRIA COMPANY, GRASS VALLEY.

Machinery.—Low-pressure engine; diameter of cylinder, 3 feet; length of stroke, 3 feet. Three 20-horse boilers, one pair of large crushers, and 21 stamps. Supply of water not sufficient for crushing. Have a small foundry, and make their own castings. An improved stamps' head used. The shoe removed every fortnight.

Claims.—The vein-stone from the principal vein on Gold Hill yields from 15 to 25 dollars per ton; and that obtained under water-level, for the three months up to January last, gave an average yield exceeding 20 dollars. They are crushing quartz for other parties working on Scott's claim, on Gold Hill, the yield from which, last week, was upwards of 50 dollars per ton.

As soon as the drainage of Gold Hill is effected, they will be able to raise a large quantity of vein stone from their claim there; and, if they had funds sufficient to enable them to drain their claims on New York and Osborne Hills, they would have a sufficient supply of water for double the machinery they have at the works now.

ROCKY BAR MINING COMPANY, MASSACHUSETTS HILL.

Machinery.—Engine of 35-horse power, high-pressure, with double-flue boiler. Mining pump, 6½ inches diameter, 6-foot stroke, capable of discharging 250 gallons per minute. Capstan, shears, and necessary framing at pit-mouth. Proposed battery of 13 stamps, 750 lbs. each. Estimated cost of works, including cost of proposed battery, 18,000 dollars. It is intended to raise 300 tons of rock, as a test, before entering the battery.

Claims.—At Rocky Bar, middle fork of the American River, and on Massachusetts Hill, and Gold Hill, Grass Valley—Massachusetts Hill the principal locality. Rock claims, average value 40 to 50 dollars per ton. Rock has been wrought down to water-level in claim (48 feet below surface of the hill). New operations commenced by sinking large engine-shaft, so as to strike the vein at 80 feet below water-level, and work by galleries in face of ledge. Shaft 9 feet 6 inches by 4 feet 6 inches. Inside setting, pitch of vein 35° to 40°. Average thickness of vein, 1 foot at water-level, increasing with descent. The development of this mine will aid and benefit the Agua Fria Company's drainage, who have claims on the hill.

Mr. C. S. Seyton, the engineer and superintendent, commenced erecting the machinery only about two months ago, and expects to have the engine set going this week. The amount of money expended since the first formation of the company, in 1851, is under 50,000 dollars. The success of this company has been retarded by the usual amount of ignorance and inactivity in the agency first employed, inadequate machinery, and the want of funds, incident to most of the quartz companies in California. Under the present plan of operations, success is considered certain.

THE EMPIRE COMPANY.

[Incorporated May, 1851; sometimes called "Lola Montes" Mine. She is said to have two shares, or one-fifth of the mine.]

Machinery.—Engine of 50-horse power, high pressure. Battery of eight stamps, 1000 lbs. each, eight more erected, and two Chilean mills for pulverising the tailings. Can crush 20 tons per day (24 hours). Pumping machinery at ledge, with engine of 8-horse power, high-pressure; and pump, 10 inches diameter, with 30-inch stroke.

Claims.—Ophir Hill, Grass Valley. Quartz varying from 20 to 70 dollars per ton, averaging about 45 dollars.

The company is a joint-labour association, in 10 shares, the partners having advanced 1500 dollars each; those giving their labour receive 150 dollars per month, and the balance of profit is divided ratably per share. They had great difficulty, and incurred considerable expense, in pumping their mine, but now get a steady supply of first-rate quartz, and are making money rapidly.

The following is the amount of gold sold by them to Adams and Co.'s house last:—

August	21 days' running time	\$11,375 31
September	16 " "	7,046 80
October	25 " "	26,763 75
November	10 " "	9,075 12
Dec. and Jan., to Feb. 10th	40 " "	25,300 95
Total	111½ days	\$89,561 93

HELVETIA AND LAFAYETTE COMPANY.

[Incorporated April, 1852.]

Machinery.—Engine 25 horse, high pressure. Two batteries of nine stamps each; stamps, 7 cwt.

Claims.—Helvetia and Lafayette Ledge. Quartz averaging above 30 dollars per ton. Vein from 2 to 3 feet thick. Mine well opened by tunnel and shafts. Have 12 claims of 80 feet each, making 960 feet in length; and a number of claims on Gold and Massachusetts Hills.

The Lafayette Hill vein is very uniform and regular, and is encased in gneiss. To the depth of about 25 feet, the upper part of the vein was very rich, at 35 feet it was poorer than it is at the depth of 50 feet, and likely to get better as it is deeper worked. Rock hard, and of a different character from that in Gold Hill and Massachusetts Hill. The cost of taking out the ore is a little over 5 dollars per ton. A large new mill is in course of erection at the ledge.

This company commenced in debt, occasioned by the large sum agreed to be paid as the purchase money for the mine (some 70,000 or 80,000 dollars), but have gradually nearly paid it off from the proceeds of the mill. Mr. Conway is the president and superintendent.

CROSETT'S MILL.

Machinery.—Engine of small power, with a battery of 10 stamps, 7 cwt. each.

Claims.—Osborne Hill, and neighbouring localities. Quartz, value from 30 to 70 dollars per ton.

This company has been most successful, and netted a very large sum from the results of their claims on Osborne Hill. The proprietor is said to have cleared over \$100,000.

ORLEANS MILL.

Machinery.—Engine of 10-horse power, high-pressure, with a battery of 12 revolving stamps.

Claims.—Henston Hill. Quartz averaging 45 dollars per ton. This company is newly started (about three months ago), and up to this time has been very successful, earning from 3000 to 5000 dollars per week. One of the proprietors told me he had previously lost 32,000 dollars in quartz mining. The revolving stamps are supposed likely to answer well, the wear being more equitable.

FRENCH COMPANY'S MILL.

Machinery.—Engine 8-horse power, high pressure, with eight stamps, 4 cwt. each. Is held in 10 shares, and worked by owners, and making money. It is a new mill, and has a sort of patent amalgamating process (not Lechamé's). They lately struck a bunch of ore, the quartz only weighing about 1000 lbs., from which they obtained \$12,300 (\$4400). One of the proprietors naively remarked, "C'est trop riche!"

MANHATTAN COMPANY.

Machinery.—Engine 45-horse power, high-pressure, with a grinding machine, consisting of a large cast-iron trough, 12 feet in diameter, in segments, the bottom 12 in. thick, and chilled; the sides 15 inches. In this trough six wheels revolve, 4 feet in diameter, 7 inches on face, also chilled. These wheels are of great weight (1 ton each), make 25 revolutions per minute, and over them is a large revolving plate, with screws to regulate pressure.

LARAMIE'S.

This claim is on New York Hill, and was lately offered for 100 dollars by the proprietors; since fell on a bunch of ore, from which 7000 dollars (1400*l.*) was extracted. The average of the quartz is now yielding about 50 dollars per ton, and is at present being crushed at the Agua Fria Company's mill, for which, and amalgamation, 7 dollars per ton is charged.

[The continuation of this interesting paper, with "General Remarks" and Tables Return of Quartz Mills, Crushers, &c., will appear in our next Journal.]

CALIFORNIA—ITS STATE AND PROSPECTS.

Mr. G. Aikin, consul at San Francisco, has communicated some "Commercial Notes on the State of California" to the Foreign Office, in which the trade of California in 1851 is thus summed up:—

"The trade of the country is assuming a steadier aspect. During 1854 there have been no extraordinary changes in the value of merchandise like those of the former years, and the amount passing through British hands may be estimated at 250,000*l.* There is a good deal of European capital in the country, and investments are easily found with unquestionable security, at 24 to 30 per cent. per annum. Amalgamation has advanced rapidly, and the quantity of every kind of grain produced is nearly equal to the consumption. But prices are not high enough to encourage the growers, and a decrease may be expected this year. The following statement has been carefully prepared, and is considered trustworthy:—

WHEAT, 135,024 acres sown, yielding 25 5-15 bushels on average per acre; quantity grown, 1,498,533 bushels. The imports of grain and flour have decreased very considerably.

GOULD DOLLARS.—Exports according to manifests at the Custom House amount to 2½ millions of dollars, equal to about 10,400,000*l.* sterling; of which 9,300,000*l.* is sent to the eastern ports of the United States, 750,000*l.* to London, 41,000*l.* to Panama, 6700*l.* to Chili, 126,750*l.* to China, 2200*l.* to Calcutta, 4000*l.* to Manila, and 65,000*l.* to the Sandwich Islands. This export is less than that of 1853 by about 140,000*l.*; but the decrease is attributed to improvements effected by local capital, and to the issue of coin from a local mint.

QUICKSILVER.—Exports, 30,963 flasks, equal to 1,572,235 lbs., of which 318,320 lbs. were shipped to China, 249,000 lbs. to Chili, 270,750 lbs. to Peru, 750,750 lbs. to Mexico, and 270,500 lbs. to New York. Value during the year 3*l.* per flask. The exports in 1853 were 18,500 flasks.

COAL.—3301 tons from Vancouver Island, 4126 tons from Oregon, and only about half as much from Great Britain as in 1853. Vancouver and Oregon coal, being inferior, is at present seldom used for steam purposes; and the steam vessels have been compelled to burn hard coal from New York and Philadelphia.

TRUNKS continue to employ many vessels, but there has been a decrease lately. Mining occupies about 100,000 people, and the yield is still abundant. There are

WEEKLY LIST OF NEW PATENTS.

APPLICATIONS FOR PATENTS, AND PROTECTION ALLOWED.

W. James: Screw bolts.—D. Lane: Motive power by water.—A. Longbottom: Preparing sand for casting (a communication).—F. Arrive: Safety valves.—F. A. le Comte de Fontaine-Moreau: Steam-boilers (a communication).—S. Hjorth, Copenhagen: Magneto-electric battery, completely specified 11th April; electro-magnetic machine (1): electro-magnetic machine (2).

WEEKLY LIST OF PATENTS SEALED.

H. A. Holden, Birmingham—Roof lamps for railway or other carriages, and for parts used in connection with the same.
J. Hopkinson, jun., Huddersfield—Steam-engine boilers and safety valves, and apparatus for indicating the vacuum in steam-engine condensers in relation to the existing atmospheric pressure.
W. G. Craig, Gorton, near Manchester—In the mode or method of consuming smoke, and in the machinery or apparatus employed therein.

J. Henley, J. Foster, and J. Lowe, Bolton-le-Moors—Machinery to be used for drawing, moulding, forming, and forging articles in metal.
D. Bazein, Paris—Improved system of railway, applicable especially on common G. Noble, Sunderland—Manufacture of fire-bricks. [and sulphuric acid.
W. Rhythe, Oswaldtwistle, and E. Kopp, Acreington—Manufacture of soda, ash, W. T. Smith, New Hampshire-road, Kentish-town, and G. Hill, City-road—Machinery or apparatus for winnowing, washing, sifting, or separating corn, gravel, minerals, and other materials.

J. Eccles, Blackburn—Machinery for the manufacture of bricks.
J. Griffiths, Wotton-under-Edge or the neighbourhood of Birmingham—Certain kinds of iron and iron machinery or apparatus used in such manufacture, part of which improvements are also applicable to machinery used in the manufacture of other descriptions of iron.

A. P. Price, Margate—Calcination and oxidation of certain metallic, mineral, and metallurgical compounds, and in the apparatus and means for effecting the same.
W. Ashton, Preston—Safety or escape valves.

J. Blakie, Glasgow—Manufacture of driving belts, straps, and bands for machinery.
H. Strong, Ramsgate—Prevention of back smoke in chimneys.

F. Blanchard, U.S.—A new and useful apparatus for generating motive power from heated air, steam, and the products of the combustion of coal or other fuel.
P. G. M. V. Maneglia, Turin and Genoa Railway—Railway carriages.

T. Harris, Nant-y-Glo, Aberystwyth—Separating the steam from the condensed water and mud in its transit from the boiler to the cylinder of a steam-engine, stationary or locomotive.

J. S. Russell, Millwall—Construction of ships or vessels to facilitate the use of water.
P. Prince, Derby—Patterns employed in making moulds for railway chairs.

IMPROVEMENTS IN BLOOMING IRON.—Mr. R. H. Thomas, of Kidsgrove, Staffordshire, has patented a machine for blooming iron, or expressing out the cinder and other impurities with greater rapidity and more effectually than is effected by the hammering process. It consists of two cast-iron drums, or cylinders, 6 feet diameter, 22 inches broad on the face, which has a ratchet surface, indented about half an inch, with a 4-inch pitch. Both cylinders revolve in the same direction, but the leading drum travels about 10 per cent. faster than the secondary one, which enables the former to carry the ball downwards quicker than the latter bears it upwards, causing it to pass between the two cylinders, and fall out beneath a thoroughly squeezed bloom. The action by which the ball is reduced to a bloom is diminished as the density of the iron increases, thus equalising the strain on the machinery; and as the bloom expands longitudinally it is resisted by a moveable up-setter, with weight and lever attached, which makes the ends sound, whether the mass of iron is of large or small dimensions. Motion is given to the cylinders by a pinion of suitable size, mounted between their axes, the whole being supported on two strong side frames. One of these wheels is 5 ft. 6 in. diameter, and the other 5 ft., by which the increased velocity of one cylinder over the other is secured. The ball is lifted by an arrangement connected with the primary cylinder, consisting of two arms bearing on the axle, one on each side, at the end of which is a cage, lying below the standard plates, and working in a joint. When the ball from the furnace is put into the cage it forces two pallet feet against the ratchet teeth of the drum, by which action it is placed on the top of the revolving cylinders, when a lever on the same axle the cage comes in contact with a stud, which detaches the cage feet, when it returns by a counter balance, and is in readiness for the next ball.

IMPROVEMENTS IN METALLIC RODS AND BARS.—Mr. E. J. Payne, of Birmingham, has lately introduced a new manufacture of compound metallic rods and bars, round, square, or rectangular, which, at a time like the present, when the price of metals has become of such importance to the consumers of rods, bars, and other descriptions, particularly of iron, extensively employed in many staple productions of the manufacturing districts, will excite much interest. By this plan an economic substitute is produced, which can be employed with advantage in the manufacture of fencing, railing, hurdles, metallic chairs, bedsteads, and other articles. The process consists in placing together two skeels of iron, of requisite weight, rolled to a semi-cylindrical shape, forming a cylinder, on which two other similar pieces, rather larger in diameter, are placed so as to break joint, and the whole is secured together by iron hoops, or strong wire. A plug of iron is then driven in at one end, the tube filled with sand, earth, or ashes, and gradually and efficiently rammed down and dried, the open end being then also plugged. The cylinder thus charged is put in the furnace, and, when at welding heat, is removed to the rolls, and rolled out in the same way as solid iron, the sand core being reduced in nearly the same proportion as the iron, depending, of course, on the solidity with which the core was rammed. The sand, or earth, during the process becomes, by the heat and great pressure, a semi-vitreous body, exceedingly hard, so close in texture as to bear a polish, and adds materially to its strength. On testing a specimen, five-eighths of an inch in diameter, against a length of solid iron rod of the same diameter, by placing both upon benches, and suspending weights from the centre, the compound rod sustained a weight, without deflection, that nearly doubled up the solid rod. Square and rectangular, or flat, rods may be also formed in a similar manner, by using angle iron of the proper weight and dimensions, and proceeding as with the cylindrical tubes described. The cost of making, ramming, plugging, and sand, may be estimated at 50s. per ton, to which may be added 1s. for contingencies and waste, and the result of 1 ton of iron will be equivalent to what would be produced from 2 tons made into solid bars.

PREVENTION OF DEPOSITS IN STEAM-ENGINE CYLINDERS.—Mr. Thomas Harris, engineer at the Nant-y-Glo Iron-Works, has just specified, under Letters Patent recently granted to him, for his invention for separating the steam from the condensed water and mud in its transit from the boiler to the cylinder of a steam-engine, stationary or locomotive. The specification thus defines his invention:—Instead of the pipe which is usually used for conveying the steam from the boiler to the cylinder, a continuous and uninterrupted passage, conveying the steam (as is well known to engineers) a great quantity of condensed water and mud, occasioning an accumulation in the cylinder very detrimental to the working of the engine, causing the cylinder to be quickly worn away, the piston to require frequent packing, and a large unnecessary consumption of fuel, tallow, oil, and the like, to interrupt the continuity of the said passage by introducing arrangements of parts such as those hereafter particularly described, which he denominates the separator, whereby the condensed water and mud is separated by a system of lever on the top of the receptacle: this float, when the water and mud reaches the bottom of the receptacle, is caused to rise, and allow the water and mud to pass into a prolongation of the receptacle, from whence it is discharged, without the loss of any steam.

NEW MATERIALS FOR AXLE-BOXES.—Mr. Campbell, of Columbia, Ohio, has made application at Washington for a patent for making a bond of union between cast-iron, at a very high temperature, and glass in a state of fusion, and designated for boxes in which the axles of wheels revolve. The glass is for the interior of the box; and, causing but little friction, it requires but little lubrication, and is, therefore, economical, costing less than cast-iron.

PALMER'S IMPROVEMENTS IN PROPELLING.—The importance attached to the propulsion of steam-vessels by the screw, instead of paddle-wheels, from its undoubted superiority and greater safety, is continually eliciting, from the minds of scientific and inventive men, means of still further simplifying the principles, rendering its necessary parts less weighty, and yet increasing its power. Among these, Mr. Edward Palmer, of Southampton, has matured and patented a screw-propeller, which is much lighter, more powerful in proportion to its diameter, and more easily adapted to ordinary use. It consists of a light skeleton frame, forming two wheels, held together by a central shaft, at the right angles, secured by bolts and nuts into suitable grooves, in which the curved blades, four in number, are fixed. These blades are made of plate-iron, formed to take as much purchase in the water as will have the maximum effect, without choking. One side of each blade is placed at an angle of 65°, and the other takes the water at an angle of 45°. They are capable of being removed, or attached, at pleasure, and to suit the power of the engine and sailing of the vessel. When not required as a propeller, this screw may be allowed to revolve by the natural force acquired by drawing through the water, with scarcely any impediment to the vessel's motion, from its lightness and the peculiar angle of the blades; as, when detached from the fast gearing, it revolves on the shaft with the slightest power. The patentee considers that the subject has as yet been but imperfectly understood, and that he has at last discovered the most perfect and effective figure and pitch of the screw-propeller; and he claims for it a ready inclination to revolve in the slightest current of water or air, greater simplicity and power, its adaptation to attain any velocity required, high or low, and that it will propel a vessel from 50 to 100 per cent. further in the same period, with less fuel consumed, than screws of the ordinary construction. They work more kindly than the ordinary propellers, not likely to receive injury at sea, cannot get foul of sunken ropes, or chains, from ships in rivers, and from the immense mechanical strength which they may be made to possess. A screw steam-vessel on this principle is continually running in Southampton Water; and, from experiments made with the common three-bladed screw, the vessel run the distance, from pier to pier, in 23 minutes, the engine making 170 revolutions per minute. With the patent four-bladed propeller, the distance was run in 17 minutes, 108 revolutions per minute; and, with the same weight on safety-valves in both instances. Models of the propeller may be inspected on application to the patentee, who has also a plan for testing and proving all that is necessary to be known respecting the shape and size of the screw, to obtain any desired speed, with the quantity of steam required per minute, at a certain pressure for a given time.

IMPROVEMENTS IN SHAFT BEARINGS FOR PROPELLERS.—Mr. J. Penn, the eminent engineer of Greenwich, has patented a novel plan for the construction of propeller shafts, or bearings for shafts, particularly under circumstances such as screw propeller shafts, where high velocities are required. In the Journal of the 21st March, we briefly noticed this invention, which consists in surrounding the journals of the shaft with brass casings. The inner surface of the bearings are grooved, in radial fillets, or ribs, which project beyond the inner surface, like cog wheels, so as to prevent the shaft coming in contact with the metal. Through the spaces formed between the fillets water is allowed to flow freely between the shaft and the bearings, keeping the whole cool, and acting as a lubricator. Another modification of the invention is to fix the wooden fillets on the shaft, which then rotate with it in the brass bearings. The wood preferred for the purpose is lignum vitae, which is found so well to withstand friction in machinery; and the improvement has already been applied to numerous vessels, including several of Her Majesty's ships of war.

LANDS IMPROVEMENT COMPANY.

It is a well-known and generally admitted fact, that with respect to the lands of this country, although, taken as a whole, they are probably the best cultivated in Europe, an urgent necessity exists over a large portion of them for permanent improvement. The past quarter of a century has witnessed the application and rapid progress of chemistry to agricultural pursuits in England, Wales, and Scotland, with the most satisfactory and important results; but, notwithstanding throughout every country large districts will be found, where practical operations would prove of the utmost importance, such as draining, irrigation, embanking from sea or tidal rivers, building, bridges, reservoirs, streams for irrigation, reclaiming waste, making farm roads, and clearing and planting such improvements, in many instances would, undoubtedly, have been more extensively undertaken but for the want of capital, and the absence of any means of obtaining the necessary assistance with facility, and on convenient and liberal terms. We have, on more than one occasion, called attention to the operations of the Lands Improvement Company, who, in 1853 (16 and 17 Vic., cap. 154) obtained an Act of Incorporation, by which they are enabled to supply an abundance of capital on economical and liberal terms, and effect the removal of the various obstacles which have hitherto existed in its application to the improvement of the land. This Act extends to Scotland, as well as England and Wales, and the powers and its provisions have been framed with careful reference to the exigencies of modern agriculture.

By the aid of this company substantial improvements can be effected, by, or on behalf of, persons possessing only limited or special interests in land, as tenants for life, trustees, incumbents of livings, and generally all persons in actual possession, or in the receipt of rents. Such persons are empowered by the Act to charge the inheritance by way of terminable annuity, for from 14 to 25 years, with the outlay for any of the above-mentioned improvements, together with all engines and machinery, and necessary for carrying the required improvements into effect.

The processes by which the company effect these desirable objects are inexpensive and simple, yet effective. It is only necessary for the Inspector of the Enclosure Commissioners to visit the estate, and report whether the estimated increase in the value of the land will justify the charge proposed; no investigation of title will be required, beyond a sufficient and certified extract from the deed, or will, under which the lands are held, and a list of the parties in remainder. Proprietors may at their option effect their own works, and either employ their own capital, or avail themselves of the requisite assistance from the company, as their agents, and of the benefit of the powers and machinery of the Act.

It will thus be seen that the Act permits a landowner to contract for and obtain a loan from the company, for the purposes of required improvements, or to employ his own capital on the same, and to charge the inheritance with the outlay. The company's commission, where the landowner executes his own works, and contracts for a loan from the company, is 5 per cent.; but in cases where it is sought only to charge the inheritance with the authorised outlay from his own funds, 3 per cent.; which, with the moderate solicitor's fee, is added to the gross sum charged upon the estate. In the case of glebe lands in England, the consent of the bishop of the diocese and the patron of the living is necessary, and in Scotland that of the presbytery of the bounds and the patron must be in writing. To persons engaged in agricultural pursuits, particularly those of scientific attainments, who are alive to the advance of general knowledge, and anxious to progress with the spirit of the age, these details must be highly interesting, and to all of whom we strongly recommend the perusal of the prospectus and other explanatory documents of the company, the objects of whose operations are—the conservation of the interest of the landowner, and the more perfect development of the capabilities of the soil of this country.

COMPANY OF COPPER MINERS IN ENGLAND.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—From the report of the meeting, in the Journal of the 7th instant, I perceive that the court of assistants have declared a dividend of 7½ per cent. upon the preference shares, and 1 per cent. on the consolidated stock. Not only have I the misfortune to be an original stockholder, but I am likewise a creditor, whose amount has been reduced and rendered into consolidated stock. It was anticipated that, at the last annual meeting, the consolidated stock would receive this year a fair dividend; but I can see the case, when we look at the costly staff the company maintain! It may be stated that the salaries received by each individual are not of large amount. I believe the managing director receives 800l. per annum, the court of assistants divide amongst them 1200l., the auditors are paid 100l., the secretary 300l., and Messrs. Pulling, who are the trade agents of the company, are no doubt recompensed by the commissions they receive on their transactions. If to these we add the large staff of clerks at the London offices, as well as the officials at Cwm Avon, it will be seen that these great expenses must swallow up much of the dividend which the unfortunate holders of consolidated stock ought to receive. If the company employ trade agents, why the necessity of a secretary, with a heavy salary, and a staff of clerks, whose principal duty must be to enter transfers of stock and shares, in a concern where, according to the opinion of several of the shareholders, uttered at the meeting, there have occurred but few transactions, the scrip being considered so depreciated in value in the market, that no broker or banker would advance any money on it. I write this under correction. For my own part, I can only see that, at some future period, and at no distant time, the company will undergo the same resuscitation process which is undergoing at two short years since. This, as you are aware, has been the first time; and although the Governor and Company of Copper Miners in England has generally done well for the direction, it has been most unfortunate in its results to the general body. When the charter was granted to Sir Joseph Herne, John Briscoe and Francis Tysson, Esqs., the association was divided into 7000 shares; about ten years afterwards they were in great difficulties, and though they had the privilege of working in England, Wales, Ireland, and New England, so grossly had they mismanaged affairs, that the stock was increased by a fresh issue of shares to 21,000, a great portion of which was, apparently, taken up by the then holders of consolidated stock. Their smelting works were then at Lower Redbrook, in Gloucestershire; they possessed, however, copper mines, or shares, in adventures in Cornwall, and a rolling mill was leased by them at Wimbledon, in Surrey. In the year 1873, there was danger of the charter of the company being forfeited for non-use; at that time the company only having an interest in an annuity of 100l. per annum, so that for thirty-three years the governor and court of assistants were on y required as a matter of form to keep up the company.

About the same period, an association for working Sir Carbery Pryse's mines, in Wales, was established. After some few years, under the title of the "Mine Adventurers," they were obliged to compound with their creditors; they do not, however, appear to have been possessed of the same sluggish vitality which has characterised either the Copper Miners in England, or the Mines Royal and Mineral and Battery Works (having long been defunct). All that is known of the last-mentioned company is, that its annual court, according to Queen Elizabeth's charter, should be held the first Thursday in December, and that it purchases parcels of copper ore at Swansea. It is a close corporation, that publishes no accounts; originally formed for developing mines, but is now merely a smelting company.

In spite of their quasi-reformation, there is no doubt they still require amendment. Although the accounts are open to all the shareholders, it is not to be expected that they have time to investigate them, or be enabled to follow them through all their intricacies. A balance-sheet should be prepared, which ought to be in the hands of the proprietary at least a fortnight before the meeting; hitherto, the custom has been only to receive the set speech of the governor, and move that it be entered on the minutes.

If at any time the stockholders are to obtain any commensurate return for the great sacrifice they have made, the first step to be taken must be a great reduction in the expenditure for salaries of the high officials and the staff; those should be paid; but I would have the old adage put in force, "there should be no more cats than would catch mice." The best men should be placed in the right places, and not pitched into office, or salaries raised, through directorial influences. A reform to be salutary should commence with the principals; the works should not be burdened with more than they could really afford, or employ more people than would be the case in a mercantile establishment of like magnitude. If once be not the case, the shareholders, who are now receiving the 7½ per cent., will find themselves as another class of consolidated stockholders, while the original holders will find their interest decreased to a minimum extent. Let all parties, therefore, not be supine, but look after their own interests: in this company, if they refer back to its annals, they can be guided by the experience of over a century and a half, there is no excuse either for directors or stockholders, and a strict supervision on both sides would be no doubt beneficial to one and all.

A HOLDER OF CONSOLIDATED STOCK.

LIABILITY OF SHAREHOLDERS.—In the Court of Common Pleas, on Wednesday, an action was brought by Messrs. Harvey and Co., the merchants, against Mr. Parton, for the value of materials supplied to East Wheel Vor, in which he is a shareholder. The plaintiff's case was that between the 4th February and the 20th of March, 1854, they supplied goods to the amount of 652. 2s. 10d. to the East Wheel Vor Mining Company, the defendant at the time being a holder of 100 shares in the concern. The number of shares when the defendant joined the company was 10,000, but the number was afterwards reduced to 3500. At the end of the plaintiff's case, the defendant's counsel said that he could not deny that his client had originally taken the 100 shares, but without any authority from him the number of shares was reduced to 3500. The learned judge said he did not think the counsel could make anything of that. He did not believe that there was anything from which it could be inferred that the defendant was not a shareholder of the concern. It was just like goods supplied to an ordinary partnership, and it appeared that the defendant, like everybody else, had concurred in what was done. The jury found a verdict for the plaintiff, for the amount claimed.

Works published at the Mining Journal office, 26, Fleet-street, London:
GEOLOGY AND MAGNETISM. By EVAN HOPKINS. 16s.
GEOLOGY AND MINING—FOUR LECTURES BY G. HENWOOD, 2s. 6d.; by post, 3s.
GOLD ROCKS OF GREAT BRITAIN. By JOHN CALVERT. 10s. 6d.
WINNING AND WORKING OF COLLIERIES. By MATTHEW DUNN. 12s. 6d.
SUPPLY OF WATER IN SWANSEA. By MICHAEL SCOTT. 10s.
PROGRESS OF MINING IN 1854. By J. Y. WATSON, F.G.S. 6d.
STATISTICS OF THE MINING INTEREST FOR 1854. By W. H. COWELL, Esq. 6d.
GLOSSARY OF ENGLISH AND FOREIGN MINING AND SMELTING TERMS. 2s.
THE MINING JOURNAL. 2s. 6d.
THE COST-BOOK—TAPPING'S PRIZE ESSAY. 6d.
THE COST-BOOK—TAPPING'S PRIZE ESSAY—WITH NOTES AND APPENDIX. 5s.
THE COST-BOOK SYSTEM: ITS PRINCIPLES & PRACTICE EXPLAINED. 6d.
CEYLON: ITS PRODUCTS, CAPABILITIES, & CLIMATE. BY G. W. PATER. 2s. 6d.
BRITISH MINES CONSIDERED AS A MEANS OF INVESTMENT, with particulars of the principal Dividend and Progressive Mines in England and Wales. By J. H. MURRAY, F.G.S. 3s. 6d.; by post, 4s.

THE STEAM-HAMMER.

Mr. Robert Morrison, of Newcastle-on-Tyne, has made some improvements in the steam-hammer, his object being to prevent the great wear and tear, and liability to that derangement or breakage which, he states, has been experienced in the ordinary steam-hammers, forming a serious drawback to the use and efficiency of this valuable tool. In Nasmyth's hammer, the head is attached to the piston rod, and is guided by side cheeks in the frame, a shallow rib entering a groove on each side of the hammer head. Considerable play is necessarily left for the fall of the hammer, causing a violent shake and jar at each blow; while the blow, being seldom in the centre of the face, a side jar is the result; the constant repetition of these shocks indents and wears away the hammer face and guides, increases the side play to an injurious extent, displaces the packing, and often breaks the piston rod. In Condie's hammer the motion is reversed, the piston and rod are fixed, the cylinder forms the hammer, having the head fixed below, and is guided by rubbing against the side cheeks of the frame at the top and bottom; the steam is admitted through the piston rod, which is hollow. By this arrangement the jar is not communicated to the piston, but the rubbing surfaces of the hammer guides are exposed to a similar injurious action, and the blow of the hammer is liable to break the cylinder.

In Morrison's hammer the cylinder remains fixed; the piston rod itself forms the shaft of the hammer, being enlarged in diameter, and prolonged through the top of the cylinder, above which the upper end is steadied by sliding between guides. The hammer is guided by two large stuffing-boxes at the top and bottom of the cylinder, works with steadiness, and freedom from friction, the rubbing surface being a turned cylindrical piston rod, fitting closely in stuffing boxes, instead of sliding loosely between the cheeks of the frame. The hammer head of the machine which the patentee has had in operation at the Ouseburn Engine Works, Newcastle, weighs 2 tons, with a clear fall of 3½ feet; it has been tried with 35, 40, and 50 lbs. pressure of steam, but has been found to work best at 40 lbs. per square inch. The hammer bar and piston rod are of wrought-iron, 10 in. in diameter, the piston forged solid upon it in the middle of its length, a groove being turned upon its circumference to receive a single brass packing ring, 1 inch thick, packed behind with hemp. The upper cross head is also forged in one piece with the bar. The hammer at the Ouseburn Works has been working day and night, double shift, for five months, during which period there has not been half an hour lost by any derangement in the hammer, the packing remains as good as when put on, and the cover has not been taken off since the hammer started. The large stuffing box was packed with hemp, had not been unpacked for nine weeks, and no enlargement perceptible in the gland.

With the working piston rod and hammer in one solid piece, the liability to fracture and derangement is much diminished, whilst the hammering blows are of superior solidity and effect; and the bolting of the steam cylinder between the frame standard, immediately above the anvil, provides a most powerful stay for tying the frames well together, and preventing all lateral springing. The hammer face is thus most accurately directed down upon its work, by which shoulders, collars, and other projections, can be forged down with certainty to their proper size and form by the side of the hammer without any oblique thrust. The height of the arch in this machine is important, and the position of the steam cylinder in front of the standards realises a great advantage, as, when the hammer is actually between the frame pieces, the mass of iron must be angled before it can be hammered; or, if it cannot be angled, the man must stand in a dangerous position beneath the arch; but, in the patentee's arrangement, the hammer is quite clear of the framing, so that the foreman can swing, shape, or cut, any work he may have in hand, without the necessity of standing beneath the arch.

ELECTRICITY.—At the Royal Institution, on Tuesday, Dr. Tyndall delivered the second of his course of lectures on voltaic electricity. He commenced by explaining the arrangements of different metals that serve to excite electricity by contact, and the combustion of those arrangements in the voltaic battery. The decomposition of water, and the evolution of the two gases of which it is composed from zinc and platinum plates when immersed in that fluid slightly acidulated, were illustrated in a variety of ways. The hydrogen and the oxygen thus evolved, when mingled together, are much lighter than atmospheric air, as was exemplified by filling a small balloon, made of collodion, with the two gases, which rapidly ascended to the ceiling. The film of collodion forming the balloon was so light that a very small quantity of hydrogen gas was sufficient to give it ascending power; and the experiment varied by igniting the string that tied the opening, so that soon after the small balloon, though at the top of the lecture-room it exploded with a loud report. Hydrogen, though it is only known as a gas, is suspected by chemists to be a metal, and several of the experiments of Prof. Faraday on the compression and condensation of gases had for their object to give metallic form to hydrogen. The metallic character of that gas is apparent in its voltaic actions, for plates of platinum which have served for conductors of a voltaic battery exhibit voltaic action in consequence of their being covered over with the two gases, hydrogen and oxygen, even after the connection with the battery has been broken. This curious fact, of two plates of the same metal becoming voltaic though detached from any voltaic arrangement, was shown in several experiments; and to make the phenomenon appear the more remarkable, the plates were taken out of the fluid in connection with the battery, and were immersed in a vessel of water, without losing their electrical condition. The secondary current, as it is called, which is thus established by the evolution of hydrogen from the surface of the negative plate of the battery, interferes with the action of ordinary voltaic arrangements, and to overcome that obstacle Mr. Grove and Prof. Bunsen contrived their nitric acid batteries, which are much more energetic than the common voltaic arrangements. Dr. Tyndall, after explaining some of the different kinds of voltaic batteries which have been found most generally useful, proceeded to consider the various conducting powers of substances for voltaic electricity, and he elucidated this branch of his subject by some striking illustrations. The effect of heat in increasing the resistance of metals to the transmission of electricity was shown by two well arranged experiments. Two coils of platinum wire were placed in the circuit, and when they were blowing with heat, one of them was plunged into cold water, the effect of the greater quantity of electricity that passed through the coil that was cooled. The reverse of that experiment was shown by giving greater heat to one of the coils by a spirit lamp, when the resistance to the passage of the electricity being increased, the coil, which was before glowing brightly, became dim. At the conclusion of the lecture, Dr. Tyndall exhibited the decomposition of water by throwing the shadow of the voltaic wires on a screen by means of the electric light.

NEW DICTIONARY OF THE ENGLISH LANGUAGE.—It is an undoubted, and a very generally acknowledged truth, that although many works of high merit, descriptive of the English language, have been published, yet none have long remained a compilation which should meet the requirements of modern times, by the introduction of many words inadvertently omitted in all former editions, and the improvement, and the intellectual value of the age. We are happy to find that this desideratum has now been accomplished in the publication, by Mr. John Weale, of High Holborn, of a new and comprehensive Dictionary of the English language, as spoken and written, and which will form a part of his Rudimentary Series. The commencement of the volume is occupied by a copious grammar of the language, including the history and philology of the English tongue, a new theory and practice of English grammar, forming a complete and comprehensive essay on the subject, which must be of great utility to the student, and an excellent volume of reference to the writer and general reader. The philological portion of the work embraces practical instruction on sixteen languages allied to the English, though the acquisitions of the English embrace as many languages and dialects as Mesopotamia. Our respected correspondent, Mr. Hyde Clarke, D.C.L., is the author of this novel publication—novel, as he has boldly struck out a path of his own, and instead of a new edition, a new work of a Johnson or a Walker, Mr. Clarke has produced a work more extensive in which everything is explained in common English, avoiding Latinisms, and are that it contains above a hundred thousand words, being sixty thousand more than any similar work yet published, and with ten thousand additional meanings for words not hitherto given. The terminals of adverbs, adjectives, &c., are given separately, without repetition of the mother word—a plan which has effected much economy in space. The author indeed has introduced every possible improvement which could be devised to facilitate the study of the language, and in which we think he has been eminently successful. As usual, the publisher, Mr. J. Weale, has fallen no meanly in his general spirit of enterprise; the type and paper are unexceptionable, and the volume will, doubtless, not only occupy a place on every library table, but find, from moderate price, a large circulation among the mechanical and working population.

SULPHATE OF SODA.—If an extensive and profitable use could be found for the sulphate of iron, one good mode of obtaining sulphate of soda would be by boiling solutions of sulphate of iron and salt, until the whole of the solution and iron sulphate is precipitated as an insoluble salt, leaving sulphate of soda in solution, which might be obtained by crystallisation or evaporation. As, however, ammonia is a substance produced in different ways, and effectually fixed by means of sulphuric acid, the best mode of decomposing salt will be by sulphate of ammonia, when the sulphate of soda and muriate of ammonia may be obtained separately, each in the state of the greatest purity.—T. H. LEBRON.

In the House of Commons, on the 8th of May, Mr. Bouverie will bring a bill to amend the Law of Partnership; also a bill to alter and amend the Act for Registration of Joint-Stock Companies.

STEAM-ENGINES AND STEAM BOILERS TO BE SOLD.—ONE NEW 10-horse power DONKEY PUMPING ENGINE, with double force ONE NEW 12-horse power BEAM ENGINE. [pump.] ONE NEW 45-horse power COMPOUND ENGINE, with high and low-pressure cylinders. ONE SECOND-HAND 12-horse power BEAM CONDENSING ENGINE. ONE SECOND-HAND 60-horse power COMPOUND, PORTABLE MARINE ENGINE, with high and low-pressure cylinders. ONE NEW 50-horse power VERTICAL TUBULAR BOILER, suited for a steam-boat or land engine. ONE SECOND-HAND 16-horse power CYLINDRICAL BOILER, with thorough flue and furnace. TWO SECOND-HAND MARINE TUBULAR BOILERS, of 50-horse power each. Apply to T. G. GREENWOOD and Co., Drogheda Ironworks, Drogheda.

IMPORTANT TO LEAD SMELTERS.—The INVENTOR is PREPARED TO CONSTRUCT, upon liberal terms, a DOUBLE REVERBERATORY FURNACE, capable of making a SAVING of 50 per cent. FUEL over that of the best constructed furnaces in Europe; at the same time guaranteeing the general loss in smelting not to exceed 5 per cent. The inventor, after 20 years' experience, both in England and various parts of the Continent, has discovered the method, in the regular course of smelting, and without any extra cost, of separating antimony from a certain class of silvery-lead ore, thereby rendering the lead free of all impurities, and, at the same time, the antimony in a marketable state. All letters to be addressed to "C. J. R.," Mining Journal office, 26, Fleet-street, London. A perfect model is to be seen on application to the inventor.

TO ARCHITECTS, SLATE MERCHANTS, BUILDERS, AND OTHERS.—The DIRECTORS of the MACHINO SLATE AND SLAB COMPANY having completed their arrangements for the REMOVAL of their SHIPPING PORT to CONWAY, for the convenience of vessels unable to lower their masts to pass the tubular bridge, are now PREPARED TO RECEIVE ORDERS for their justly celebrated SLABS and SLATES, from the Ffestiniog vein, which for beauty of colour and durability are unequalled. The slabs have been largely used in the construction of houses for Australia; and, from the facility with which they are erected and removed, are well adapted for movable huts for men and horses at the proposed camps in England and Ireland. All applications to be addressed to Mr. T. H. WICKLER, the resident director, at the company's offices, Conway, North Wales.

HALSEY'S PATENT CRUSHER AND AMALGAMATOR.—This machine is NOW IN OPERATION at ESSEX WHARF, ESSEX STREET, STRAND. GOLD ORES carefully TESTED on the following terms, including the use and distillation of mercury:—
Samples not exceeding 5 cwt. £1 10 0
" " 10 cwt. " 2 0 0
" " 1 ton. " 2 15 0
" " 2 tons. " 3 15 0
" " 4 tons. " 4 10 0
Larger quantities by special agreement. Price of the machine complete, £300.

KENTLEDGE ALWAYS IN STOCK, OR MADE TO BUYERS' OWN SPECIFICATION.—Apply to WILLIAM F. SIM, Sweeting-street, Liverpool. N.B. Old Kentledge bought.

PATENT SAFETY FUSE.—The GREAT EXHIBITION PRIZE MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH, DAVEY, and PRYOR, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of the gunpowder. This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate. Address: BICKFORD, SMITH, DAVEY, and PRYOR, Tuckermill, Cornwall.

SAFETY FUSE.—Messrs. WILLIAM BRUNTON and CO., PEN-
HALLOCK, near REDRUTH, CORNWALL, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe. Messrs. BRUNTON & CO. are at all times PREPARED TO EXECUTE UNLIMITED ORDERS for SUPPLYING FUSE direct from their own MANUFACTORY, and warrant that it will prove equal to, if not better, than any to be procured elsewhere.

PATENT IMPROVED WIRE ROPE WORKS, MILLWALL, POPLAR.—A. J. HUTCHINGS, and CO., Sole Makers to the Lords of the Admiralty, and for other purposes, GALVANIZED or UNGALVANIZED, MANUFACTURED upon an IMPROVED PRINCIPLE, ensuring great pliability and durability. The superiority of these ropes over hempen ones, in point of strength, lightness, durability, and cost, is admitted by all who have tried them. GUIDE ROPES, SIGNAL CORD, LIGHTNING CONDUCTORS, &c. Offices, 117, Fenchurch-street, London.

WIRE ROPE AND SUBMARINE TELEGRAPH WORKS
30, WAPPING, LONDON.—The undersigned respectfully solicit attention to the great REDUCTION in the PRICE of their ROPES, which they continue to manufacture of the very best material. The only Prize Medal awarded for "Excellent Workmanship" in wire ropes, shown at the Great Exhibition in Hyde Park, was obtained by them. WILKINS AND WEATHERLY.

IMPROVED PATENT WIRE ROPE.—Mr. ANDREW SMITH, the ORIGINAL INVENTOR of WIRE ROPE, LIGHTNING CONDUCTORS, and SUBMARINE TELEGRAPHS, solicits the attention of the public to his IMPROVED PATENT MANUFACTURE, as the best and cheapest, having obtained his sixth patent since 1835.—Office, 69, Princes-street, Leicester-square, London.

HENRY J. MORTON AND CO.'S (No. 2, BASINGHALL BUILDINGS, LEEDS) PATENT WIRE ROPES, for the use of MINES, COLLIERIES, RAILWAYS, &c.; one-half the weight of hempen rope, and one-third the cost; one-third the weight of chains, and one-half the cost—in all deep mines these advantages are self-evident. References to most of the principal colliery owners in the kingdom.

GALVANIZED SIGNAL CORDS AND KNOCKER LINES; will not rust or corrode, and not affected by the copper water in mines. Very strong, and not at all liable to break. Prices from 15s. per 100 yards.

PATENT ASPHALTED ROOFING FELTS, 1d. per foot.
DRY HAIR BOILER FELTS, to save COAL.
PATENT BOILER COMPOUND, for bad water.
FAIRBANK'S WEIGHING MACHINES, of all sizes.
GALVANIZED IRON ROOFING AND SPOUTING.
MILNER'S FIRE-PROOF SAFES.

STOCK OF MINING AND RAILWAY STORES in Liverpool and London:—viz., OILS, GREASES, COITON WASTE, SPUN YARN, WHITE LEAD, VARNISHES, &c., at very low prices.—Address, 2, Basinghall-buildings, Leeds.
SOLE AGENTS for Prof. GLUKMAN'S ELECTRIC SIGNAL from RAILWAY GUARD to ENGINE DRIVER, and also for the use of COLLIERIES and MINES. N.B. Illustrated price list on application.

MORTON'S PATENT WIRE ROPES.—HENRY J. MORTON AND CO., GALVANIZED IRON ROOFING AND SPOUTING WORKS, 2, BASINGHALL BUILDINGS, LEEDS.
IMPROVED PATENT WIRE ROPES, for MINES, COLLIERIES, RAILWAYS, &c. References to all the large colliery owners in the kingdom. One-half the cost of hempen rope, more durable, and ONE-THIRD THE WEIGHT OF CHAIN—very important advantages for deep mines.

FAIRBANK'S IMPROVED PATENT WEIGHING MACHINES, for the use of IRONWORKS, COLLIERIES, RAILWAYS, WAREHOUSES, STORES, &c. The most ACCURATE MACHINES in use, and the cheapest. 24
MACHINES of all sizes, from 1 cwt. to 30 tons, for RAILWAY WAGONS, CARRIES, or WAGONS.—For prices and all other information, apply to HENRY J. MORTON and Co., Galvanised Ironworks, 2, Basinghall-buildings, Leeds.
Asphalted Roofing Felts, Boiler Felts, Galvanised Iron, &c., in Stock.

CHEAP, LIGHT, AND DURABLE ROOFING, ONE PENNY PER FOOT.—HENRY J. MORTON AND CO., 2, BASINGHALL BUILDINGS, LEEDS. PATENT ASPHALTED ROOFING FELTS, for roofing sheds, corn-tracks, cottages, ore-dressing sheds, brick and tile sheds, and all agricultural purposes. One penny per square foot. The cheapest roofing manufactured. Stocks kept in London, Leeds, and Bristol. DRY HAIR BOILER FELTS, for saving fuel. 10
H. J. MORTON AND CO., 2, Basinghall-buildings, Leeds.

BRICK MAKING MACHINES.
TO CONTRACTORS, BRICK, AND TILE MAKERS, AND
CLAYTON'S PATENTS (ATLAS WORKS) FOR AUSTRALIA AND THE COLONIES.
CLAYTON'S PATENT BRICK MAKING MACHINES offer a most important and profitable investment.

CLAYTON'S PATENT BRICK MACHINE (of which there are now upwards of 100 in use) is worked by one horse, or by steam and water power, and combines the whole process of pugging the clay and making the bricks in one time. CLAYTON'S PATENT TILE, PIPE, and HOLLOW BRICK MACHINES, of various sizes and construction.

CLAYTON'S PATENT BRICK or TILE PRESSING or SODDING MACHINES. CLAYTON'S PATENT DIES, for the manufacture of sodding sewage pipes. CLAYTON'S PUGGING MILLS, of various sizes and construction, for tile clay, brick earth, mortar, &c. And every article connected with the brick, tile, and pottery trade.

The above machines may be inspected, and illustrated catalogues obtained, at the manufacturing, Atlas Works, Upper Park-place, Dorset-square, London.
(TESTIMONIAL.)
Hastings, near Manchester, Dec. 5, 1854.—Sir: Several kilns of bricks made by your machines have been burnt, and I have great pleasure in informing you that they are as good as can be desired. They are in all respects superior to hand-made bricks, and command a much better price. Your machines are simple and efficient implements. I have sent you a few bricks for a sample, which I hope you have received. I remain, your's, very truly, J. BAWTHORNE.
Mr. Clayton, London.

CLAY PURIFICATION OF GAS.—This process is APPROVED and ADOPTED by some of the most intelligent GAS ENGINEERS in the Kingdom, and their opinions are fully borne out by the investigations of Dr. Letheby and other scientific authorities. It will, no doubt, be employed in nearly every well managed gas-works; and will lead to an enlarged consumption of gas in private houses, from which it is now excluded by a fear of its impurity. Terms of license, &c., may be obtained of Messrs. HOLMES BROTHERS, Huddersfield, agents to the patent. In use at the gas-works of Leeds, Preston, Huddersfield, Wakefield, West Riding County Gas, &c.

RAILWAY WAGONS.—WM. A. ADAMS, MIDLAND WORKS, BIRMINGHAM.
BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS.
IN STOCK—FOR SALE OR HIRE.

RAILWAY WHEEL AND AXLE WORKS.—GEORGE WORSDELL AND CO., WARRINGTON, MANUFACTURERS OF EVERY DESCRIPTION OF HAMMERED IRON, TYRES, AXLES, &c. 104

GRIFFIN AND HENSON, RAILWAY CARRIAGE AND WAGON BUILDERS, SOHO, BIRMINGHAM.
MANUFACTURERS OF EVERY DESCRIPTION OF IRONWORK for RAILWAY CARRIAGES AND WAGONS. 105

INGLIS AND CHISHOLM, MANCHESTER, MAKE SMALL STEAM-ENGINES for MINERS, CONTRACTORS, &c.; also, DRILLING, PUNCHING, and SHEARING MACHINES, and OTHER TOOLS, of the best quality, at a reasonable price.—Address, INGLES and CHISHOLM, Charles-street, Garstang, Manchester. 106

MESSRS. ROBERT STEPHENSON AND CO. CONTINUE TO CARRY ON THEIR MANUFACTORY at NEWCASTLE-UPON-TYNE. They insert this notice in consequence of an advertisement, which may probably mislead. 107

CLECKHEATON IRONWORKS, YORKSHIRE.—JOHN TAYLOR, MANUFACTURER OF ALL KINDS OF FORGINGS for LOCOMOTIVE, MARINE, and OTHER ENGINES, HEAVY SHAFTING, ARM MOULDS, and ALL OTHER COUNTRY FORGINGS. 108

MUNTZ'S SOLID BRASS TUBES for LOCOMOTIVE, MARINE, and STATIONARY ENGINES, are CHEAPER and more DURABLE than any other kind of brass tubes.—Address, Geo. RICHARDSON, No. 10, Craig's-court, Charing-cross, London. 109

THE OLD LODGE IRON COMPANY, LLANELLY, SOUTH WALES, MANUFACTURERS OF BEST SCRAP and DOUBLE WORKED BOILER and SHIP PLATES, are PREPARED to SUPPLY FINISHED BOILERS, WROUGHT-IRON TANKS, BRIDGE GIRDERS, &c., at low prices, guaranteeing speedy shipment or railway delivery to all parts of the kingdom. 110

TO IRONMASTERS, MERCHANTS, CONTRACTORS, FOUNDERIES, &c.—Messrs. DAUNT and MOFFAT, METAL BROKERS, 59, ST. VINCENT STREET, GLASGOW, OFFER THEIR SERVICES for the PURCHASE and SALE of FIG and MANUFACTURED IRON. All orders carefully executed, and prompt shipments made. 111

STIRLING'S PATENT IRON.—The TOUGHENED CAST-IRON for GIRDERS, SHAFTINGS, ROLLS, PINIONS, RAILWAY WAGON WHEELS, ENGINE CYLINDERS, and for all purposes where a strong, dense iron is required, can be PROCURED of the following branches:—
DUNDEE. LLOYD, FORSTER, and CO. 112
FORBES COMPANY. RUSSELL'S HALL, &c.
HORNLEY COMPANY.

RAILS OF (or surfaced with) PATENT HARDENED IRON, can be OBTAINED of the following makers:—
PARKGATE. EBBW VALE.
CROOKHAY. DUNDEE.
BAGNALLS. MONKLAND.
BLAINA. HAWKS, CRAWFORD, and CO., &c.

By direct application to the several works.
Full information as to manufacture, quality, and terms for use of patent right, will be given by Mr. CHARLES MAY, 3, Great George-street, Westminster; and by Mr. W. P. MARSHALL, 54, Newhall-street, Birmingham.

Messrs. THORNTON AND SONS, of BRADFORD STREET, BIRMINGHAM, RECEIVE ORDERS for Mr. MORRIS STIRLING'S PATENT IRON, RAILS, &c.

PRICES OF TIN-PLATE.
BRAND. Tin. Terne.
First quality Charcoal. Parson's IC Pont-à-Tawe Charcoal. 30s. per box 29s. per box.

Second quality Charcoal. Parson's IC Charcoal. 28s. per box 27s. per box.

Coke. Parson's IC Coke. 26s. per box 25s. per box.

Puddled. Parson's IC Puddled. 24s. per box 24s. per box.

F.o.b. Swansea, cash payments.—6s. per box advance on each +.

WILLIAM PARSONS, Pont-à-Tawe, near Swansea, Manufacturer of Tin-plate, Terne-plate, Blunt-plate, &c.

THE MIDLAND IRON COMPANY, ROTHERHAM, YORKSHIRE, MANUFACTURERS OF RAILWAY TYRES AND AXLES for LOCOMOTIVE ENGINES, CARRIAGE AND WAGON WHEELS. From the tests to which this iron has been submitted by engineers and railway companies during several years, its superior quality has been generally acknowledged, and can be unhesitatingly affirmed. 114

NORRIS'S PATENT RAILWAY CHAIR COMPANY beg to draw the attention of railway companies and engineers to NORRIS'S PATENT RAILWAY CHAIRS. This patent has received the unqualified approbation of some of the most eminent engineers of the day, as the most effective, economical, and perfect joint in use at the present time. The simplicity of its construction is such as will allow of its application to any line of railway, without causing the slightest hindrance to the ordinary traffic during the time that it is being laid down.

The saving in the preservation of the permanent way and rolling stock by the application of Norris's Patent is incalculable; and wherever adopted must very considerably decrease working expenses.

To railway companies, having old and bad roads, the principle is peculiarly advantageous, as its application will not only restore the road to a perfectly safe and serviceable state for many years, but, at the same time, bring into efficient use all the old and broken chairs.

To the railway world in general it is of the greatest value, as it admits of the easiest locomotion, and is most simple and economical in principle.

Every information will be given, and models forwarded for inspection, on application to the manager, at the offices of the company, Wolverhampton.

RAILWAY TRUCKS.—TO BE LET, on reasonable terms, a QUANTITY of NEW 6 TONS RAILWAY TRUCKS.—For particulars, apply to Mr. THOS. LUCAS, Wellington Chambers, Cannon-street, London. 116

RAILWAY AXLE-BOX COMPANY.—The axle-boxes manufactured under the combined patents of this company perfectly EXCLUDE SAND or GRIT, PREVENT the ESCAPE of GREASE, and thereby secure PERFECT LUBRICATION, also DIMINISHED FRICTION, FREEDOM FROM HOT AXLES, and a SAVING of, at least, 75 per cent. in the consumption of grease and the cost of repairs, thus ensuring those important desiderata in railway transit—SAFETY, ECONOMY, and EFFICIENCY. Terms for licenses, and every information, may be obtained of GEORGE RICHARDSON, Manager. 117

THE PERMANENT WAY COMPANY beg to call the attention of civil engineers, contractors, and others interested in the construction of railways to the PRESENT LOW PRICE of IRON, by which a SAVING may be effected of nearly £300 per mile, single line, in the ADOPTION of Mr. W. H. BARLOW'S PATENT WROUGHT-IRON PERMANENT WAY, over that of the ordinary road. Every information can be obtained on application to WM. HOWDEN, Sec. 30, Great George-street, Westminster. 118

MESSRS. GWYNNE AND CO. are PREPARED to GRANT LICENSES for the REDUCTION of IRON, COPPER, LEAD, TIN, and OTHER ORES, FUSING and REFINING METALS, CEMENTATION of STEEL, &c., by their NEWLY PATENTED PROCESS. Results can be produced in less than half the time at present required, and it is expected eventually in practice it will not exceed one-third, reducing the cost of the best steel to one-half its present price, with a corresponding saving in time and reduction in price in all other metals.

Messrs. GWYNNE and Co. are also PREPARED to GRANT LICENSES for the MANUFACTURE of their NEW and POWERFUL FUELS, superior to all others yet brought before the public, in their increased heating and calorific value, their entire freedom from spontaneous combustion, their density and compactness of form, and in their great economy of first cost, by the improved modes of manufacture. Machinery for the complete manufacture of 1 to 50 tons of this fuel per hour may be procured from Messrs. Gwynne and Co. Samples of the fuel may be inspected, reports on its value, and all other information, can be had by applying to Messrs. GWYNNE and Co., engineers, Essex Wharf, Strand, London.

WALKER'S SELF-ACTING REVOLVING COAL SCREEN.—The PATENTEE and PROPRIETOR of this ECONOMICAL RIDDLE, which has been found SUPERIOR to all others, and a great SAVING OF EXPENSE over the old system of riddling coals, is prepared to produce upwards of 150 testimonials from the leading coal proprietors in Lancashire, Yorkshire, Staffordshire, &c., where his riddles have been in use for many years, and may be seen daily at work. Address, Green Cottage, Eccleston, near Prescott, Lancashire. 120

SUBSTITUTE FOR HORSES.—NEILSON'S MINERAL LOCOMOTIVE ENGINES.—The subscribers, at the request of several iron and coal masters, having turned their attention to the substituting of a SIMPLE and CHEAP LOCOMOTIVE ENGINE, for the horses employed upon their works at so much trouble and expense, have perfectly SUCCEEDED in doing all kinds of horse-work with their little MINERAL LOCOMOTIVE ENGINES, which are simple in construction, can go upon any part of a railway that a wagon can be put, and are even substituted for the rope and sled engines upon inclines. There are many of these engines at work in England and Scotland, doing the work of from four to fifteen or twenty horses, at a saving to the proprietors of from £350 to upwards of £1000 per annum. NEILSON and CO., Locomotive Engine Builders, Glasgow. 121

MR. LEE STEVENS'S PATENT FURNACES constitute a perfect SYSTEM of SMOKE PREVENTION and ECONOMY OF FUEL, for all manufacturing purposes, from the smallest pan to the largest copper or boiler; and is remarkable for simplicity, cheapness, and facility of adaptation. Average saving of fuel, 20 per cent. The novelty and validity of his letters patent have been legally established, and the statutory certificates of the Lord Chief Baron duly obtained. Drawings of a variety of furnaces in successful operation, inclusive of those on the premises of Bevington and Morris; Charrington, Head, and Co.; Day and Martin; Keens and Welch; Pott and Co.; the Times printing-office; and hundreds besides.—Testimonials, official reports, &c., may be seen at 1, Fish-street-hill, City. 122

IMPORTANT DECISION RESPECTING THE LLANGENNECH COAL UNDER THE SMOKE NUISANCE ACT.—An information was exhibited against Mr. Fleming, Brewery, Camberwell-green, at the Lambeth Police Court, on the 12th February, 1855, for not having applied an apparatus for the consumption of smoke to the furnaces of his copper and steam-engine.

Subsequently to the examination of his furnaces by the Government Inspector he abandoned the use of the ordinary North Country, and adopted that of the Llangennech Coal; since which, it was admitted by the police inspectors, no smoke had been observable.

It was not denied by Mr. Fleming that smoke had issued from the premises during the time the ordinary steam coals of the North were in use; but it was asserted by one of the inspectors, who visited the premises, that the Act of Parliament required an alteration in the construction of the furnace, so as to consume the smoke, notwithstanding the use of a coal which was itself smokeless. That question was argued before Mr. Elliott, the police magistrate, and the following report, and the decision thereon, appeared in the daily papers the next day:—

Mr. Parry, counsel for the defendant, drew the magistrate's attention to a clause in the Act of Parliament, which stated that all furnaces at present in use, and hereafter to be used, must be so constructed as to consume their own smoke; and observed that, without any re-construction of his furnace, Mr. Fleming had, since the information was laid, used only the Llangennech Smokeless Coal, the same as had been used for many years at Sir Henry Meux's brewery, and which was in effect a perfect compliance with the Act; but, inasmuch as the inspector of police had intimated to his client that, without the application to the furnace of the smoke-consuming apparatus, he would still be liable to an information, he (Mr. Parry) wished to take the magistrate's opinion on the point.

The police magistrate (Mr. Elliott) stated that he considered the matter exceedingly simple; if there was no smoke caused, there was none to consume, and, therefore, no complaint could arise under the Act.

Llangennech Coal Company.—London Office, Wenlock Basin, Regent's Canal, City-road; Collieries, Port of Llanelly, South Wales.

These coals are also used in the Government victualling yards, in the biscuit ovens, flour mills, and the Admiralty war steamers.

VENTILATION OF COAL MINES.—BIRAM'S PATENT ANEMOMETER (Price, 12 in., £4 4s.; 6 in., £3 3s.) TO BE OBTAINED OF THE MAKER, JOHN DAVIS, Mathematical Instrument Maker, Derby. 124
Dials, Levels, Pit Barometers, and all accessories pertaining to the engineer.

EMIGRATION.—AUSTRALIA AND AMERICA.—Parties with limited means wishing to proceed to above or other colonies are advised to make arrangements prior to the "Passenger's Act" Amendment Bill, now before Parliament, being passed, which will tend materially to increase the expense. Present rates, landing passengers and goods on the wharves free:—Melbourne, &c., £15 15s.; New York, £3 10s.; Boston, &c., £2 15s. WILLIAM BARNETT and CO., 23, Philpot-lane, London.

MERCANTILE, MINING, & AGRICULTURAL LABORATORY, CONDUCTED BY W. CROWDER, F.C.S., CONSULTING AND ANALYTICAL CHEMIST, 104, SIDE, NEWCASTLE-ON-TYNE.

Late Lecturer on Chemistry in the Newcastle College of Medicine, and formerly Assistant Lecturer in the Laboratory of the High School of Agriculture, Society.

Mr. W. CROWDER begs to inform such persons as are connected with Mercantile, Mining, or Agricultural pursuits, that he will be happy to perform ANALYSES and ASSAYS of every description, and to be CONSULTED upon subjects pertaining to SCIENTIFIC CHEMISTRY. A limited number of PRIVATE PUPILS are admitted to the laboratory on the following terms:—
Fee for 12 months' course of instruction, in one payment in advance... £20 0 0
Fee for 6 months, payment in advance... 10 0 0

Just published, in One Volume, demy 8vo., 110 pages, Illustrated by Twenty-two Maps, Diagrams, &c. 126
FOUR LECTURES ON GEOLOGY AND MINING.

Read at Leeds, Hull, Bradford, Harrogate, &c. By Geo. HENWOOD, M.E. Forming a complete compendium of these subjects. Dedicated, by permission, to Sir CHARLES LEMON, Bart., F.R.S., F.G.S., President of the Royal Cornwall Polytechnic Society, &c.

Published (for the author) at the Mining Journal office, 36, Fleet-street, London. Price, handsomely bound in cloth lettered, 2s. 6d.; by post, 3s.

NEW PATENT ACT, 1852.—Mr. CAMPIN, having advocated Patent Law Reform before the Government and Legislature, and in the pages of the Mining Journal, &c., is now READY TO ADVISE and ASSIST INVENTORS in OBTAINING PATENTS, &c., under the NEW ACT.

The Circular of Information, gratis, on application to the Patent Office and Designs' Registry, 156, Strand.

ASSAYING.—CITY SCHOOL OF CHEMISTRY AND ASSAY OFFICE, DUNNING'S ALLEY, BISHOPSGATE STREET WITHOUT. Conducted by JOHN MITCHELL, F.C.S., Author of Manual of Practical Assaying, Manual of Agricultural Analysis, Treatise on the Adulteration of Food, Metallurgical Papers, &c. ASSAYS and ANALYSES of MINERALS, METALS, and every manufacturing product.

SPECIAL INSTRUCTION in ASSAYING and CHEMISTRY for gentlemen tending to proceed to the colonies. 129

AIR VERSUS STEAM.—Parties having doubt as to the soundness of the principle on which surplus power is acquired by GOODLET'S LARGE and SMALL DOUBLE-ACTING FORCE AIR PUMPING ENGINES, worked by a 2-in. crank and fly-wheel, will do well to consider the following facts:—
In consequence of an error in the construction of the valves of the steam-engine, by which two checks at every revolution of the fly-wheel are given to its speed, advantage has not hitherto been taken of the power of its momentum.

By Goodlet's plan of air-pumps the working valves of the engine are abolished, and consequently all checks to the speed and power of the fly-wheel from their cover.

By Goodlet's plan it will be seen that everything is done to increase the speed of the fly-wheel, upon which the speed and power of the engine chiefly depends.

By the present plan of paddle-wheels and long cranks—the sailing speed of a vessel is checked by friction of large crank, and opposition of the paddle boards passing through the water. Not so with Goodlet's plan of air pressing against the water—the sailing speed or impetus of the vessel diminishes opposition to the air pressing on the water, by which the speed and power of fly-wheels and pumps are greatly increased, and from the unlimited supply of air the sailing speed can never exceed the speed and power of the force of air from the compressing the exhausting pumps, assisted by compressed air acting on the buckets of the periphery of fly-wheels.

Suppose the speed of a fly-wheel to be 100 revolutions per minute of 60 seconds, it will receive 2000 impulses of compressed air per minute applied to the long leverage of a fly-wheel, independent of the power from the impulses on the piston of the compressing and exhausting air-pump.

It must be well known to practical engineers that there is a power called impetus, from the sailing speed of a vessel, which, if taken advantage of by the use of air-pumps, with small cranks and fly-wheels, would blow to atoms in a few seconds the strongest steam-boiler in use. This power has never been applied, nor has a fly-wheel been used to assist in overcoming the resistance which a steam-boiler engine has in counteracting contrary winds.

By the present plan of air pressing against the water, the water producing a propelling force in the opposite direction to the discharge, it will be obvious that the vessel can be made to go either forwards or backwards without making any change on the engine, and its speed regulated or stopped by means of an exit throttle cock.

For terms for the use of the patent, apply to GEORGE GOODLET, Postmaster. Leith, April 23, 1855.

ROYAL PANOPTICON, LEICESTER SQUARE.—WAR IN THE CRIMEA, Monday, Wednesday, Friday, at 4.10; Tuesday, Thursday, Saturday, at 9.10. LIFE IN POMPEII, Monday, Wednesday, Friday, at 9.10; Tuesday, Thursday, Saturday, at 4.10.—DAILY: THE GRAND ORGAN, at 12.45, 3, 5, 8, 10; THE PYRENEAN MOUNTAINEERS, at 1.40, 8; THE GRAND ELECTRICAL MACHINE, at 3.40, 8.20; the LUMINOUS and CHROMATIC FOUNTAIN, at 4.55, 9.55.—MODEL OF ANCIENT JERUSALEM EXPLAINED between 12 and 3.—LECTURES and DEMONSTRATIONS as usual.—Doors open: Morning, 10 to 5; Evening, 7 to 10. Admission, 1s.; Children and Schools half-price.

TO INVENTORS AND MANUFACTURERS.—The "SCIENTIFIC AMERICAN" is the BEST and CHEAPEST WEEKLY PAPER for MECHANICS and INVENTORS. Each number is illustrated with from Five to Ten Original Engravings of New Mechanical Inventions; also, a List of American Patents; worth ten times the subscription price to every inventor. Terms, 11s. per annum.—Apply to AVERY, BELLFLOW, GARDNER, and Co., patent agents and negotiators, No. 32, Essex-street, Strand, London. Corresponding offices in Paris, Brussels, and New York. 132

NOTICE TO RAILWAY AND STEAM-BOAT TRAVELLERS.—ANDERTON'S HOTEL, 163, 164, and 165, FLEET STREET. BREAKFAST, with joint, 1s. 6d. BEDS, 6s. 6d. per week. DINNERS from Twelve to Eight o'clock; joint and vegetable, 1s. 6d. With soup or fish, 2s. TURTLE SOUP and VENISON DAILY. TABLE D'HOTE at Half-past One and Half-past Five, at Two Shillings each. A night porter in attendance. 133

COMMERCIAL GENTLEMEN, and others visiting the Metropolis, will find EVERY COMFORT OF HOME at MISS ADAMS'S BOARDING HOUSE (late Green's), 19, ADDE STREET, WOOD STREET, CITY. Central situation.—Excellent beds.—Terms strictly moderate.—No charge for servants.—Porter up all night.

"What is infirm from your sound parts shall fly."—Shakespeare.
Health shall live free and sickness freely die. Shakespeare.
THE ONLY REAL CURE WITHOUT INWARD MEDICINE IS ROBERT'S ROYAL BATH PASTER. 135
Price 1s. 1/4d. for children 9/4d. each.
Sold by all chemists and booksellers in the Kingdom.

HOLLOWAY'S PILLS INVIGORATE THE SYSTEM and PROMOTE HEALTH.—Mrs. Reynolds, of Burton, had been a great sufferer for many years, from a complication of nervous diseases, so that her constitution had become very much impaired, which affected both her mental and physical powers. Her strength, also, was completely prostrated. Change of air, change of scene, and every available remedy, was resorted to without any beneficial effect whatever, as she appeared to be sinking fast. Holloway's pills were commenced at this critical period, and by this unrivalled medicine Mrs. Reynolds speedily derived temporary relief, and ultimately a permanent cure was effected, and she continues to enjoy excellent health.—Sold by all vendors of medicine, and at Prof. Holloway's establishments, 214, Strand, London; and at 80, Maiden-lane, New York. 136

THE MINING SHARE LIST.

Share.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
5130	Alfred Consols (copper), Phillack	£211s. 10d.	£10 10 10	10 10 10	£11 5 0	£0 4 0—April, 1855.
2000	Alfred Consols (copper), Phillack	2	1 1/4	1 1/4	0 3 0	0 1 6—July, 1851.
2000	Anglian Coal Company	7	7	7	0 10 0	0 2 0—Nov., 1851.
1234	Balmain (tin), St. Just	11 1/2	6	6	13 5 0	0 5 0—Jan., 1854.
4900	Bedford Union (copper), Salop	17. 17s. 6d.	9 1/2	9 1/2	6 17 6	0 6 0—Feb., 1855.
5000	Black Craig (lead), Kirkcubrightshire	21. 2s. 6d.	9 1/2	9 1/2	0 5 0	0 2 6—July, 1855.
200	Botallack (tin, copper), St. Just	91 1/2	230 1/2	230 1/2	330 5 0	7 0 0—April, 1855.
1000	Brantall, Llanidloes, Montgomeryshire	7	1	1	0 5 0	0 5 0—June, 1851.
5000	Callington (lead, copper), Callington	77. 17s.	2	2	£1 8 0	0 4 0—Sept., 1847.
1000	Carn Brea (copper, tin), Illogan	15	85	85	229 10 0	2 0 0—April, 1854.
256	Castle Slate Quarry, Dolwyddelan	1	1 1/4	1 1/4	0 1 0	0 0 0—Aug., 1854.
256	Conduff (copper), Gwennap, Cornwall	73	7 1/2	7 1/2	0 0 0	3 0 0—April, 1851.
128	Conduff (copper, tin), Camborne	20	100	95 10 0	45 0 0	5 0 0—Jan., 1855.
1024	Cwmystwith (lead), Cardiganshire	60	185	185	45 0 0	5 0 0—March, 1855.
12000	Dervon Great Consols (copper), Tavistock	1	375	365 370	433 0 0	9 0 0—March, 1855.
179	Dhurro (copper, tin), Camborne	257 1/2	1 1/2	1 1/2	0 3 0	0 1 8—Nov., 1853.
12500	Dolcoath (copper, tin), Camborne	257 1/2	7 1/2	7 1/2	673 4 0	3 0 0—Feb., 1855.
300	Drake Walls (tin, copper), Calstock	12. 9s.	—	—	0 6 6	0 1 6—April, 1851.
128	East Darren (lead), Cardiganshire	83	80	80	8 0 0	4 0 0—Nov., 1854.
1024	East Pool (tin, copper), Pool, Illogan	24 1/2	100	100	238 0 0	2 10 0—April, 1854.
1200	East Wheal Margaret (tin, copper)	8 1/2	12	12	0 5 0	0 5 0—Feb., 1854.
494	Eyan Mining Company, Derbyshire	3 1/2	28	28	4 13 4	0 10 0—Dec., 1854.
2240	Fowey Consols (copper), Tavydreadth	40	30	30	399 13 0	1 10 0—Aug., 1850.
320	Foxdale, Isle of Man	77. 10s. 6d.	25	25	41 7 8	1—April, 1855.
4448	Ditto (New Shares of 25s. each)	25	25	25	2	0 16 0—April, 1855.
2000	General Mining Co. for Ireland (cop., lead)	2 1/2	2 1/2	2 1/2	1 0 8	0 3 3—June, 1855.
1024	Goginan (lead), Cardiganshire, Wales	8	6	6	0 7 6	0 7 6—Dec., 1850.
3000	Gomara (copper), St. Cleer	13 1/2	14	14	0 1 0	0 1 0—Sept., 1854.
13750	Great Crofton (copper), St. Austell	4 1/2	1 1/2	1 1/2	6 10 0	0 4 3—Oct., 1852.
119	Great Polgoth (tin), St. Austell	100	200	200	181 10 0	5 0 0—Nov., 1854.
1024	Herodfoot (lead), near Liskeard	8 1/2	3	3	2 12 6	0 7 6—April, 1854.
6000	Hingston Down Consols (copper), Calstock	3 1/2	11	11	1 5 6	0 6 0—March, 1855.
1000	Holmbush (lead, copper), Callington	25	—	—	25 0 0	—Feb., 1844.
2000	Holyford (copper), near Tipperary	11	—	—	3 8 0	0 3 0—Sept., 1852.
74	Jamaica (lead), Mold, Flintshire	37. 13s. 6d.	—	—	380 0 0	5 0 0—March, 1855.
2045	Kenegny (copper), Breage	6s. 7d.	1 1/2	1 1/2	0 4 0	0 4 0—March, 1855.
786	Kirkcubrightshire (lead), Kirkcubright	9 1/2	—	—	1 15 0	0 5 0—April, 1854.
2000	Lackamore (copper), Tipperary, Ireland	1	1 1/2	1 1/2	1300 0 0	50 0 0—Feb., 1855.
30	Lewis Mining Company, Isle of Man	100	1000	1000	0 2 0	0 2 0—Aug., 1851.
5000	Lewis (tin, copper), St. Erth	37. 8s.	100	100	1044 0 0	2 0 0—Feb., 1855.
160	Levant (copper), St. Just	2 1/2	195	195	218 15 0	2 10 0—Dec., 1854.
400	Lisburne (lead), Cardiganshire, Wales	18 1/2	22 1/2	22 1/2	2 10 0	1 5 0—Dec., 1854.
320	Machno Slate and Clay Company	18 1/2	22 1/2	22 1/2	1 17 6	0 15 0—Dec., 1854.
160	Ditto (New Shares)	18 1/2	22 1/2	22 1/2	0 2 6	0 2 6—May, 1855.
6000	Marke Valley (copper), Cardigan	41. 10s. 6d.	2 1/2	2 1/2	0 17 6	0 7 6—Dec., 1854.
5000	Mendip Hills (lead), Somerset	3 1/2	2 1/2	2 1/2	1 2 0	0 2 0—Jan., 1855.
5000	Merylun (lead), Flint	2 1/2	16 1/2	16 1/2	10 6 6	0 14 0—Jan., 1854.
20000	Mining Co. of Ireland (copper, lead, coal)	7	16 1/2	16 1/2	0 3 9	0 1 3—Nov., 1851.
5000	Nantlle Vale (slate), Llanfyllin	1	1 1/2	1 1/2	—	—
470	Ditto	4s.	2	2	41 0 0	2 0 0—Jan., 1855.
100	Newtonards Mining Company, Co. Down	50	65	65	324 0 0	2 0 0—Dec., 1854.
200	North Pool (copper, tin), Pool	23 1/2	100	100	249 10 0	4 0 0—Sept., 1853.
140	North Rosekeel (copper), Camborne	16	100	100	4 1 0	0 5 0—March, 1853.
6000	North Wheal Bassett (copper, tin), Illogan	nfl.	19 1/2	19 20	23 6 0	0 10 0—July, 1853.
6100	Par Consols (copper), St. Blazey	1 1/2	12	12	3 6 0	0 10 0—Oct., 1854.
500	Peak United (lead), North Derbyshire	7 1/2	8 1/2	8 1/2	1 15 0	0 10 0—June, 1851.
1100	Perran St. George (cop., tin), Perranzabuloe	21 1/2	15	15	0 0 0	10 0 0—Nov., 1855.
200	Phenix (copper, tin), Linkinghorne	30	300	300	0 0 0	1 0 0—Sept., 1854.
1000	Polberron (tin), St. Agnes (Preferential)	15	—	—	24 4 0	1 5 0—Feb., 1855.
5600	Province Mines (tin), Uny Lelant	20 1/2	21	—	0 8 0	0 4 0—Jan., 1853.
1948	Rix Hill (tin), Tavistock	3 1/2	—	—	3 0 0	3 0 0—March, 1853.
256	Rosewarne United (copper, tin), Gwinear	24	160	160	358 0 0	8 0 0—March, 1853.
256	South Caradon (copper), St. Cleer	2 1/2	320	320	2 5 0	0 2 6—April, 1853.
256	South Tamar (silver-lead), Beerfields	18. 6s. 6d.	6 1/2	6	69 0 0	4 0 0—May, 1853.
256	South Tamar (silver-lead), Redruth, Cornwall	16	375	365	276 5 0	10 0 0—March, 1853.
256	South Wheal Francis (copper), Illogan	3 1/2	375	365	8 8 6	0 2 6—Dec., 1853.
1024	Spearake Consols (tin), St. Just, Cornwall	1 1/2	3	3	0 17 6	7 0 0—April, 1853.
1024	St. Aubyn and Grylls (copper, tin), Breage	3	2 1/2	2 1/2	858 0 0	8 0 0—Feb., 1854.
94	St. Ives Consols (tin), St. Ives	80	100	100	11 10 0	3 0 0—Oct., 1850.
1000	Stray Park and Camborne Vein (copper)	10 1/2	5 1/2	5 1/2	4 11 0	2 0 0—Feb., 1854.
9600	Tamar Consols (silver-lead), Beerlston	4 1/2	2 1/2	2 1/2	6 18 6	0 10 6—Feb., 1853.
6000	Tincroft (copper, tin), near Pool, Illogan	7 1/2	2 1/2	2 1/2	7 16 0	0 5 0—Feb., 1855.
256	Trethane (silver-lead), Menheniot	8 1/2	5 1/2	5 1/2	1 3 0	0 5 0—Oct., 1847.
6000	Treleigh Consols (copper), Redruth	3 1/2	8 1/2	8 1/2	1 13 0	1 0 0—Feb., 1854.
872	Trelyon Consols (copper), Gwennap	11 1/2	24	24	4672 15 0	7 0 0—Jan., 1855.
96	Tresavean (copper), Gwennap, Cornwall	32 1/2	150	150	403 13 6	10 0 0—April, 1851.
120	Trethellan (copper), Gwennap, Cornwall	10 1/2	—	—	0 0 0	0 1 0—Feb., 1855.
10000	Trevalga (slate), Rosecastle	1	—	—	303 10 0	4 0 0—March, 1853.
120	Traviska and Barriar (copper), Gwennap	130	6 1/2	6 1/2	0 13 0	3 0 0—June, 1854.
4096	Trewheta (silver-lead), Menheniot, Cornwall	2	8	8	55 0 0	5 0 0—Dec., 1854.
100	Trumpet Consols (tin), near Helston	95	—	—	47 5 0	2 0 0—Feb., 1854.
400	United Mines (copper), Gwennap	40	210	210	2 5 0	0 2 6—Jan., 1855.
1024	Wellington (copper, tin), Perranzabuloe	8 1/2	6 1/2	6 1/2	1 0 0	0 10 0—Jan., 1855.
7500	Wheal Foston (silver-lead), Talybont, Card.	5	—	—	0 11 0	0 7 0—Jan., 1855.
2500	Ditto	3 1/2	29	28 1/2	2 10 0	0 10 0—March, 1853.
6000	West Bassett (copper), Illogan	1 1/2	29	28 1/2	265 5 0	4 0 0—Feb., 1855.
256	West Caradon (copper), Liskeard	20	175	175	2 0 0	0 10 0—Feb., 1855.
256	West Damsel (copper), Gwennap	£10 7	180	180	23 5 0	1 5 0—Nov., 1854.
1024	West Providence (tin), St. Erth	5	14	14	23 0 0	5 0 0—April, 1853.
300	West Wheal Seton (copper), Camborne	77	275	275	3 0 0	0 10 0—April, 1853.
1228	Wheal Arthur (copper), Calstock	8	20	20	642 10 0	20 0 0—April, 1853.
256	Wheal Buller (copper), Illogan	18 1/2	500	500	651 5 0	25 0 0—March, 1853.
256	Wheal Charlotte, Perranzabuloe	5 1/2	500	475 500	0 10 0	0 10 0—Feb., 1855.
1024	Wheal Clifford (copper), Gwennap	3 1/2	13 1/2	13 1/2	6 11 1/2	2 13 1/2—April, 1853.
5700	Wheal Exmouth and Adams Union	47. 14s.	6	5 1/2	2375 10 6	8 0 0—May, 1854.
128	Wheal Friendship (copper), Devon	—	115	—	1 5 0	0 3 0—Sept., 1852.
5000	Wheal Golden (sil.-lead), Perranzabuloe	4 1/2	7 1/2	7 1/2	0 2 0	0 2 0—May, 1853.
256	Wheal James (iron, copper), Roche	14 1/2	—	—	4 10 0	1 0 0—Oct., 1853.
512	Wheal John (silver-lead), Kea	23 1/2	—	—	30 0 0	2 0 0—Aug., 1854.
112	Wheal Margaret (tin), Uny Lelant	79	100	100	220 0 0	5 0 0—May, 1854.
512	Wheal Mary Ann (lead), Menheniot	5 1/2	32 1/2	32 1/2	25 15 0	2 10 0—Feb., 1855.
80	Wheal Owles, St. Just, Cornwall	70	400	400	12 8 0	2 10 0—Feb., 1855.
240	Wheal Reeth (tin), Uny Lelant	24 1/2	258	258	40 10 0	8 0 0—Sept., 1852.
198	Wheal Seton (tin, copper), Camborne	107	32	32	254 10 0	8 0 0—April, 1853.
256	Wheal Trevelyan (silver-lead), Liskeard	8 1/2	4 1/2	4 1/2	47 10 0	1 0 0—Jan., 1855.
1024	Wheal Trelawny (silver-lead), Gwinear	8 1/2	4 1/2	4 1/2	10 2 6	0 7 6—Jan., 1854.
4096	Wheal Wrey (lead), St. Ives	17. 9s.	5 1/2	5 1/2	0 4 0	0 4 0—Feb., 1854.
5000	Wicklow (copper), Wicklow	5	38 1/2	38 1/2	21 13 0	1 13 6—July, 1854.
10000	Wrysgan (slate), Festiniog	1	1 1/2	1 1/2	0 2 0	0 1 0—Aug., 1854.

FOREIGN MINES.

8000	Altan Mining Company (copper), Norway	214%	2	4	50	0	150	0	Nov., 1858.		
7200	Brasil, Grand Duchy of	1	3	10	0	0	10	0	Nov., 1852.		
10000	Brasilia, Imperial (gold), Brazil	23%	3	34	17	6	0	100	Dec., 1844.		
2464	Buenos Ayres (copper), South America	150%	1	130	0	0	5	0	Sept., 1854.		
12000	Cobre Copper Company (copper), Cuba	40	54	34	69	12	0	4	0	Jan., 1855.	
100000	Colonial Gold, Australia	1	1	0	1	6	0	16	0	March, 1854.	
10000	Coplapo Mining Company (copper), Chili	15	24	23	4	18	0	1	0	March, 1855.	
20000	General Min. Assoc. (iron, coal), Nova Scotia	30	10	8	10	0	0	10	0	Jan., 1855.	
10000	Linares (lead), Pozo Ancho, Spain	3	7	7	2	6	0	15	0	March, 1854.	
193813	Mariquita and New Granada	1	1	0	0	2	0	0	1	July, 1855.	
20000	Mexican and South American (cop.), Mexico	9	7	0	6	0	7	0	0	Jan., 1855.	
185678	North British Australasian	1	1	0	0	0	0	0	8	March, 1854.	
2000	Obernhoef (lead), Nassau	1	1	0	0	10	0	0	1	June, 1853.	
7000	Royal San Fernando (copper), Cuba	12%	6	33	4	0	1	50	0	July, 1846.	
104000	San Fernando (silver-lead), Linares	15	1	0	19	0	0	0	7	June, 1854.	
11009	St. John del Rio (gold), Brazil	15	32	31	27	16	2	0	0	Nov., 1854.	
43174	United Mexican	23%	8	7	1	16	6	0	4	0	Feb., 1855.

NON-DIVIDEND FOREIGN MINES

Shares.							Paid. Last Price. Present.							Shares.							Paid. Last Price. Present.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
75000	Adelaide Land and Gold Comp.	1	—	—	—	—	60000	Linarres, New, (lead, cop.), Spain	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

MINES WHICH HAVE SOLD ORES.

MINES WHICH HAVE SOLD ORES.		Paid, Last Price, Present.	
Shares.			
3000	Altarnun Cons. (tin, cop.), Altar.	2½	2 ...
940	Balncon Cons. (tin), Eny Lelant	...	...
4000	Ballyswidden (united)	3	1½ ...
13000	Barnegreen (lead), W. Llanidloes	3½	3 ...
4000	Ballyvirgin, Co. Clare	£1 8	...
15000	Barytes Company of Ireland ..	1	1½ ...
4000	Bedford Consols	1s.	...
2000	Bell and Lanarth, Gwynnapp ..	11	...
1500	Beth Aller, Bridgend	18	5½ ...
500	Birch, Tor and Llanidloes, Lydford	£5 6	...
1000	Bolling Well (copper)	10	17½ ... 17 16
120	Bollwall and Nanpean (tin) ..	20	...
400	Boringdon Consols, Plympton ..	4½	...
240	Boscan (tin), St. Just .....	...	75 ... 50
433½	Bottle Hill (copper), Fyfebridge	2½	...
125	Britannia, Llanarnon	£7 19 6	15 ...
4000	Brynford (lead), Wales .....	...	...
100	Brynford Hall (lead), Flint .....	...	100 ...
400	Buddick Consols (tin), Ferran ..	2½	2½ ... 2½
2000	Burich (sil. lead), Cardiganfrie	4	...
6000	Caerleon (gold) .....	...	...
6000	Caer-Gran, Carmarthenshire ..	8s. 6d.	...

Share.	Paid.	Last Price.	Percent.
1024 Caspberry & Carlsson, S. Wales	...	...	...
3384 Calstock Consols (copper)	4 1/2	2 1/2	5
3184 Calstock United (tin and cop.)	24 1/2	...	...
1900 Camborne Consols	3 1/2	13 1/2	19 1/2
1024 Carndon Consols, St. Cler	...	...	...
3000 Carbons (tin, copper), Crown	...	...	...
3000 Carnarvonshire Stale	...	...	...
3048 Carrobyn (tin), St. Just	1	1 1/2	1 1/2
8000 Carreg-hova (cop., lead), Salop.	1	1 1/2	...
1050 Carrnallan (copper), Gwennap	20 14 1/2	3 1/2	3 1/2
4096 Castle Dinas (tin), St. Colomb.	2 1/2	...	...
6000 Caylan, North Wales	23 1/2	...	...
6000 Cefn Brynnydd (tin), St. Colomb.	...	65	...
2000 Cefn Iwan (lead), Cardiganshire	15 5 1/2	...	...
1024 Cefnllan & Wentworth (tin, cop.)	14	14 1/2	13 1/4
3000 Clowance Wood	8 1/2	...	...
2000 Coal Mawr Pool (lead), Llansrwt	6 1/2	...	...
15000 Conemaara, Galway	4	...	...
2510 Cook's Kitchen, North Wales	215 19 1/2	...	...
3000 Coshcoy, Cork	...	1 1/2	...
2000 Court Grange, Cardiganshire	10	...	...
1055 Craddock Moor (cop.), St. Cler	8	13 1/2	12 1/2
6130 Craigwen, Dinas Mowddwy	1	...	...
600 Craig-y-Mwyn (lead), Llansrwt	8 1/2	...	...

Shares	Cornwall	Paid.	Last Price.	Present.	Consols	Perran Consols (Perranathnoe)	Paid.	Last Price.	Present.
1500 Creechbawn (copper), Corkwall	13½	—	—	—	9259 Perran Consols (Perranathnoe)	2	—	1½	—
1500 Crookhaven (copper), Cork	10	—	—	—	12000 Perran Wheel Group	8	—	1½	—
6400 Crow Hill, St. Stephen's	1	—	—	—	1000 Peter Tavy & Mary Tavy (cop.)	5½	—	—	—
9000 Cubert (silver-lead), Cornwall	2½	—	—	—	2000 Polgar & Lancoarow (cop.)	£2 3	—	—	—
10000 Cwm Darren (lead), Cardiganshire	13s.	—	—	—	5000 Poltimore (cop., gold), Devon	1	—	—	—
6700 Cwmdryle Rock & Green Lake	3¼	—	—	—	2400 Porellis United (tin), Wendron	8	—	—	—
1000 Cwm Erwin (lead), Cardiganshire	—	—	—	—	5400 Prideaux Wood, Lanllyfann	1½	—	—	—
9000 Dalriehy (cop.), Cardiganshire	£3 6	—	—	—	10000 Esparrey (silver-lead), Devon	1	—	—	—
10000 Darren (all-lead), Cardiganshire	5½	—	—	—	10000 Rhedol United Mine	£1 7	—	—	—
1400 Derwent (all-lead), Durham	60	—	—	—	2500 Rhoysydol & Bachelidon (lead)	11½	—	10½	10½
1024 Devon & Cornwall United (cop.)	13½	—	20	—	125-6 Rhoysydol (slate), Festiniog	1	—	—	—
3907 Devon and Courtenay (copper)	3	—	1	—	12500 Ditto	6s.	—	—	—
5000 Devon Buller Gt. Consols	16s.	—	—	—	10000 Rinsey United	—	—	—	—
4000 Devon Burra Gt. Consols (copper)	4	—	—	—	£2500 Borlington (lead), Snaillbeach	7s.	—	1s.	—
10000 Devon Great Consols (tin)	1	—	—	—	5000 Round Hill (lead), Devon	—	—	—	—
10000 Devon Little Consols (tin)	£1 6	—	—	—	5000 Round Hill (lead), Devon	£1 3	—	13	—
1244 Duke of Cornwall, Lostwithiel	£10 9	—	1½	—	5250 Silver Brook, Ashburton	1½	—	—	—
3000 Dyfnwng (lead), Wales	11½	—	12	13½ 13	4000 Sithney Wheel Buller (tin)	1½	—	1½	—
236 Eaglebrook, Llanphangell, Card.	21½	—	28	25	1500 Skidway & Blencathra, Kewick	11s.	—	—	—
4096 East Alford Consols	£1 6	—	—	—	12000 Sortridge Consols	8s.	—	3	3½
336 East Bassett (copper), Redruth	36	—	27	—	13000 Sortridge and Bedford, Tavistock Co. ad.	1½	—	—	—
1500 East Birch (A) (tin), Devon	—	—	—	—	5000 South Bedford (copper)	1	—	—	—
1000 East Birch (B) (tin), Devon	1½	—	—	—	6000 South Bog (lead), Devon	16s. 6d.	—	—	—
5000 East Black Craig	¾	—	—	—	3000 South Carn Brea (cop.), Illogan	13s.	—	4½	—
19000 East Polgoth	2	—	—	—	5000 South Cork (silver, copper)	—	—	—	—
9000 East Tamar (all-ld.), Beaufort	2½	—	—	—	5000 South Grenver (copper)	£3 18 6	—	2	—
236 East Tolgus (copper), Redruth	19	—	4	—	1254 South Garras	3s. 6d.	—	6	8
2048 East Wheel George, Walkhampton	£3 10	—	—	—	206 So. Providence (tin), Sithney	£3 7	—	6	—
1085 East Wheel Rose (all-lead)	—	—	—	—	5000 South of Scotland (tin)	2½	—	—	—
1000 East Wheel Rose, Wiskard	£3 0	—	27	25	5500 South Spence, Uny Lane	£3 6	—	—	—
3500 East Wheel Vor (sil-lead)	2½	—	—	—	2048 South Wales Consols	£2 8 4	—	—	—
564 Ecton Mountain, Derbyshire	10	—	—	—	1105 South Wh. Crofty (cop.), Illogan	sil.	—	2½	—
536 Ecton Mountain (lead, copper)	8	—	—	—	4096 South Wheel Teolad	1½	—	—	—
1280 Eagair Lee, Llanphangell-y-Croft	7	—	—	—	230 Spearne Moor (copper), St. Just	14	—	—	—
5000 Fee Donald (lead, antimony)	¼	—	1	—	3208 St. Austell Consols	£2 18	—	1½	—
24000 Fox Tor (tin), Altarnun	1	—	—	—	5000 St. Day United (tin & copper)	2	—	1½	—
15000 Galliford, Cornhill	3	—	—	—	30000 St. Hilary (tin), Cornwall	2	—	—	—
12000 Galliford-Frith-Bethryn (lead)	3	—	3½	—	512 St. Michael Penkivel (tin)	20	—	—	—
5000 Garreg (lead), Flint	£2 6	—	—	—	1800 Swanpool, Budock	7	—	5	—
4000 Gawton United	£2 12	—	—	—	10000 Talcañ (all-lead), Cardiganshire	2½	—	—	—
1024 Gilmar (tin), St. Erth	£2 10 3	—	6½	5	20000 Tasnan (lead), Ireland	2	—	0s.	—
8000 Glen Lead, Ireland	—	—	—	—	4944 Tavy Con. (cop.), near Tavistock	£2 14	—	—	—
13000 Grom (lead), Llandudno	12s.	—	—	—	6000 Thomas's United	£2 10	—	—	—
243 Granbar and St. Austell	103½	—	37½	—	3000 South Side (tin), Lanteglos	1½	—	1½	—
1000 Great Bear (tin), St. Austell	20	—	9	—	12000 Trannack Consols	1	—	1	—
30000 Great Cambrian	1½	—	0	—	1024 Trebarhaz, Perranathnoe	3½	—	2½	3½
4000 Great Cowarth, Merioneth	4½	—	3	—	25000 Treburget Consols, St. Teath	1	—	—	—
30000 Great Hewas United	£1 6	—	—	—	6000 Tregradow (lead), St. Teath	5½	—	—	—
168½ Great Onslow Cons., Camelford	2	—	2	—	4096 Trebell Con. (tin, cop.), Lanivet	£1 6	—	—	—
1024 Great Sheba Consols	21½	—	13	—	10000 Treloggan, St. Colomb Minor	—	—	—	—
6000 Great South Tolgus	5½	—	6	—	5000 Tregone Consols, St. Erth	£1 19	—	—	—
10000 Great South Wales	—	—	—	—	2000 Trenow Consols	£3 6	—	5½	—
1024 Great Wheal Alfred, Phillack	6½	—	16	17	2048 Trevelyan (tin, copper)	6	—	—	—
5120 Great Wheal Buddern (tin)	3½	—	1½	—	2500 Trevenen (tin), Wendron	3s.	—	3½	—
100000 Gt. Wh. Vor (tin, cop.), Helston	1	—	—	1½	3200 Ty-Maen, Whitford	3	—	—	—
1024 Great Wheal Fortune, Breage	£14 3	—	11	8½ 9	6400 Tyne Head (silver-lead, copper)	—	—	—	—
6000 Gwynniflon (lead)	4s. 6d.	—	—	—	4000 Tyryn-y-Worgiddol (slate), Carnar.	5	—	5	—
112 Halamanning and Croft	—	—	25	—	5000 Tyryn-y-Worgiddol (slate), Carnar.	5	—	1½	—
10000 Hawkmoor (tin, cop.), Calstock	16s. 6d.	—	—	—	2000 Uny-y-United Mines	—	—	—	—
5000 Haytor Consols (tin, copper)	4	—	—	—	6000 Union (tin), Roche & Luxillion	£1 3	—	—	—
512 Helvellyn Consols (cop.)	1	—	13	—	20000 Vale of Towry (lead)	—	—	1	—
4096 Hemerdon Consols	£1 5 6	—	—	—	2500 Welsh Potosi (new shares)	—	—	1½	—
1500 Hennock (silver-lead) Hennock	8	—	2	—	256 Wendron Consols	£32 15 5	—	7s.	—
100 Herward United (lead), Flint	30	—	35	32½ 35	2000 West Aberffwd, Cardiganshire	4s.	—	—	—
10000 Hill Bridge Consols	—	—	—	—	6424 West Alford (tin), Lanteglos	2	—	13	—
5000 Hope Moor (tin), Devon	2	—	2	—	2500 West Cranle, St. Austell	2	—	3½	—
50 0 Hope Valley	1½	—	1½	—	6400 West Fowey Con. (tin, cop.)	£5 0 8	—	—	—
12000 Irybbridge (silver-lead)	13s. 6d.	—	—	—	25000 West Par Con. (cop.), St. Blazey	1	—	1	—
2048 Kea Tremayne (tin)	nil.	—	—	—	5000 West Polberro	1	—	1½	—
6000 Kewick (lead), Portneale	£4 6	—	1½	—	6500 West Rosewarne United	2	—	2	3½
3300 Kilbricken (silver-lead), Clare	5½	—	1½	—	1056 West Stray Park	—	—	—	—
1698 Lanheroes Wheal Maria (cop.)	—	—	—	—	512 West Wheel Penances, Illogan	2	—	7	18 18
1000 Leeds and St. John Consols	£3 6	—	—	—	10000 West Wheel Penances, Illogan	1½	—	—	—
10285 Leeds Town (tin, cop.), Crown	3	—	—	—	500 West Wheel Towan (cop., tin)	36	—	—	—
4000 Loveden United, Cardiganshire	1½	—	1	—	10000 Wheal Agar (copper), Illogan	6	—	—	—
20000 Ludgvan Lease (tin), St. Ives	—	—	—	—	12000 Wheal Alfred (cop.), Hayle	1	—	1½	—
5056 Lydford Consols (lead), Devon	£3 6	—	—	—	240 Wheal Bal (tin), St. Just	6½	—	—	—
2500 Madnam United (tin), Cornwall	5	—	6½	—	256 Wheal Betsy (tin), St. Agnes	14½	—	—	—
1024 Melin Llyn-y-Pair, Merioneth	—	—	—	—	330 Wheal Carne (tin), St. Agnes	—	—	—	—
10000 Melin, Bodmin	75	—	—	40	1024 Wheal Carnate, St. Agnes	8s.	—	2	—
6400 Mitchell (lead), Flint	5s. 6d.	—	—	—	512 Wheal Constance (lead), Newlyn	11	—	—	—
4096 Middleton (lead), Snaillbeach	4s.	—	—	—	4096 Wheal Crebor (cop.), Tavistock	3½	—	1½	—
1024 Mill Pool (tin, cop.), St. Hilary	9½	—	3	—	1024 Wheal Cupid (copper), Redruth	10	—	5½	—
7500 Mixon Great Cons., Cop., Leek	£11 9	—	—	—	720 Wheal Franco, near Tavistock	20½	—	9	—
20000 Mizen Head, Cork	—	—	—	—	6000 Wheal Grenville, Camborne	—	—	—	—
10000 Molland (cop.), South Moulton	—	—	1s. 6d.	—	5000 Wheal Gwesk (tin, copper)	2½	—	—	—
10000 Moutney (lead), Flint	—	—	—	—	512 Wheal Harritt, St. Austell	—	—	—	—
1024 Mount Plack (tin, cop.), Lelant	1	—	—	—	3000 Wheal Helen (tin), Breage	1½	—	3	—
5000 Nantoes and Penrhie	1½	—	1½	—	256 Wheal Kitty (tin), Uny Lelant	£3 6 20	—	20	—
1700 Nant-y-Car (cop.), nr. Rhyader	3s.	—	—	—	5000 Wheal Kitty (tin), St. Agnes	4½	—	4½	—
5000 North Britain Burra Burra	£2 13	—	—	—	6000 Wheal Langford	£1 6	—	—	—
1024 North Buller (copper), Redruth	£10 14	—	3½	—	512 Wheal Margery (tin), St. Ives	—	—	—	—
1024 North Ding Dong (tin), Meldon	—	—	—	—	512 Wheal Mar. Ann (Perran)	6½	—	6½	—
1000 North Downs (copper), Redruth	—	—	—	—	5000 Wheal Mar. George (tin), St. Ives	—	—	—	—
2500 North France Consols, Illogan	4½	—	—	—	5000 Wheal Marshall, St. Stephens	1½	—	1½	—
2000 North Levant (tin, cop.), St. Just	1½	—	7	—	5000 Wheal Maudlin	2	—	1½	—
21000 North Staffordshire Consols	—	—	—	—	512 Wheal Montague (tin)	6½	—	—	—
10000 North Taw and Cystanog	4s. 6d.	—	—	—	8960 Wheal Pora, Cornwall	10s. 6d.	—	—	—
1128 North Wheel Crofty (copper)	£10 14 3	—	12	11 12	4000 Wh. Robert, Sampford Spiney	£1 5 6	—	—	—
1024 N. Wh. Robert, Sampford Spiney	11	—	18	—	2048 Wheal Robins (tin), Liskeard	—	—	—	—
10000 North West Lead Consols	—	—	—	—	5000 Wheal Robins (tin), Liskeard	—	—	—	—
10000 N. Wh. Unity (cop., tin), Gwenn	1½	—	3	—	1024 Wheal Sidney, Plympton	7	—	—	—
2048 Okel Tor (lead), Calstock	6½	—	3	4	982 Wheal Stanley, St. Columb	—	—	—	—
7000 Old Avarack & Nantochan United	1½	—	—	—	6000 Wheal Tehidy (copper), Illogan	2½	—	2½	2½
10000 Old Trewether Consols	1	—	1	—	512 Wheal Trefusis (cop.), Gwennap	20s.	—	18½	—
236 Old Wheal Bassett, Illogan	4	—	2	—	1044 Wheal Trenwith (copper), tin	5½	—	6½	—
5000 Oola (all-lead, cop.), Limerick	1	—	1½	—	3000 Wheal Trevena (tin), Bampton	1	—	5½	—
5000 Oreside (lead), Flint	1	—	1½	—	10000 Wheal Trewen (silver-lead)	—	—	—	—
10000 Oreside United, Limerick	—	—	—	—	3167 Wheal Unity (cop., tin), Gwennap	£2 8	—	2	—
2000 Pemroke & East Crinnis (cop.)	6½	—	2½	—	1024 Wheal Uny (tin, cop.), Redruth	£1 6	—	6	—
5000 Pencorse Consols, St. Enoder	£1 6	—	1½	—	1024 Wheal Venton (sil-lead), Lisk	£6 13	—	—	—
1500 Pencaleg (lead), Carnarvon	4	—	—	—	246 Wheal Virtue, Penarnawoath	3s.	—	4½	—
5000 Penardres & St. Aubyn (tin, co.)	3	—	—	—	6400 Wheal Whiteligh	—	—	—	—
5000 Penhal Consols (silver-lead)	3½	—	—	—	4000 Wh. Zion (cop., lead), Calstock	£ 6 6	—	2½	—
5000 Penhelly Consols	—	—	—	—	4000 Whitford (tin), Gwennap	6s.	—	—	—
120 Penmaen (gold), Llanidloes	12s.	—	5	—	4000 Wood (lead), Beaufort	10s. 6d.	—	—	—
4000 Penmopren	11s. 6d.	—	—	—	10000 Wrysgan (Preference)	1	—	1½	—
640 Pen-y-Gelli (lead), Flintshire	6	—	3½	—	10 Wyndham Consols	—	—	44	—
24000 Perran and Lelure Union	11s.	—	—	—	4000 Yealand Consols (tin, copper)	4½	—	1	—

MINES NOT HAVING SOLD ORE

MINES NOT HAVING SUD ORES.			
Shares.	Paid.	Price.	
20000 Angarrack Consols. 1	1 1/2	1 1/2	512 Great Rough Tor ... 37 ... 5
10000 Arundell Copper ... 1 1/2	1 1/2	1 1/2	12000 Great Stridgate ... nil ... 5
250 Bannion Consols ... 25 16	—	—	10000 Great Treveddce ... 2 ... 2
1800 Blain Clayen (lead) ... 1 1/2	1 1/2	1 1/2	10000 Great Wh. Martha ... 1 1/2 ... 1
5000 Bodewi, S. Wales ... 4 1/2	1 1/2	1 1/2	10000 Havan & Henfweh ... 1 1/2 ... 1
6000 Bolowen ... 4 1/2	1 1/2	1 1/2	5000 Herodcomb ... 1 1/2 ... 1
1180 Brildford ... 25 9	1 1/2	1 1/2	3000 Kerry Consols ... 52 3 6 ... 1
256 Bull. and Bassett (Unit) ... 3 1/2	87 1/2	87 1/2	8000 Kerry (lead) ... 1 ... 1
812 Butterdon (lead) ... 5 1/2	1 1/2	1 1/2	20000 Kirlaine, Donegal ... 3s ... 1
5000 Callington Valley Con. 1	1	1	12000 Lady Grenville ... 1 ... 1
6000 Camdru Mawr ... 18s ... 1	1	1	20000 Leighton ... 1 1/2 ... 1
5000 Caradon Wood (lead) ... 4 1/2	1 1/2	1 1/2	5985 Mount's Bay Consols ... 2 1/2 ... 1
30000 Carbery West, Ireland ... 1 1/2	1 1/2	1 1/2	2580 Nant-ar-Nelle ... 1 ... 1
5000 Caroline West, Copper ... 2 ... 1	1 1/2	1 1/2	2580 Nant-ar-Nelle ... 1 ... 1
6400 Carvath United ... 2 ... 2 1/2	1 1/2	1 1/2	3072 New St. Cyres ... 1 ... 1
10000 Caton (silver-lead) ... 3s ... 1	1 1/2	1 1/2	1024 New Wh. Friendah ... nil ... 5
4422 Cefn-gwyn, Cardigan ... 13 6	1 1/2	1 1/2	256 North Fowey (co.) ... 4 1/2 ... 1
1000 Collocombe ... 10 ... 1	1 1/2	1 1/2	6400 North Hingston Con. ... 1s. 6d ... 1
2400 Cwm Consols (tin) ... 1 1/2	1 1/2	1 1/2	128 Oakley (cop., gold) ... 1 ... 25 1/2
6000 Cwn Elgfa, Carnar. 1	1	1	1000 Paul's Pendas (cop.) ... 6 ... 7
12000 Ditto ... 1 1/2	1 1/2	1 1/2	5000 Pendren Consols ... 3 ... 1
5000 Dinas Great Consols ... 1 ... 1	1 1/2	1 1/2	703 Penquic ... 3 ... 1
8000 Dinawest ... 1 ... 1	1 1/2	1 1/2	6000 Perran (silver-lead) ... 1 ... 1
10000 Dunseil Wh. Phenix ... 1 ... 2	1 1/2	1 1/2	4000 Polgotho & Woodlose ... 1 1/2 ... 1
1024 E. Rosecan, St. Just ... 4	1 1/2	1 1/2	2048 Ponterwyd, Cardigan ... 2 ... 1
6144 East Caradon (cop.) ... 21 16	1 1/2	1 1/2	3860 Prignat Consols ... 1 ... 1s. 6d.
5000 East Frognach (lead) ... 1 1/2	1 1/2	1 1/2	10000 Quintrell Downs ... 1 1/2 ... 1
6000 East-Trevelyan (sil.-ld.) ... 1 1/2	1 1/2	1 1/2	8000 Red Dragon, Wales ... 1 ... 1
12000 East Wh. Martha ... 1 1/2	1 1/2	1 1/2	2400 Redall United ... 1 ... 1
10000 Glasnevin ... 4s ... 1	1 1/2	1 1/2	4000 Rilton Castle ... 16s ... 1
24000 Glenallan & Carville ... 1 1/2	1 1/2	1 1/2	100000 Royal Hibernian ... 1 ... 1
			6000 Severn (lead, cop.) ... 13 ... 13
			21000 South Devon Consols ... 1 ... 1
			6100 South Baller and ... 1 ... 1
			West Penstrual ... 1 ... 1
			240 South Trelawny ... 1 1/2 ... 1
			3072 South-West Phamix ... 18 6 ... 1
			1000 South Wheel Lead ... 1s. 6d ... 1
			6000 South Wheel Lead ... 1s. 6d ... 1
			4000 South Wheel Busell ... 1s. 6d ... 1
			5500 Tarn Maria ... 1 ... 1
			1800 Teign Hope (Dart.) ... 1 ... 1
			4520 Tregoneh & Patwork ... 1 ... 1
			2000 Tremollet Down ... 16s ... 1
			4000 Trevellyn Consols ... 1s. 6d ... 1
			4000 Trinity (cop., lead) ... 1s. 6d ... 1
			10000 Trelawny Copper ... 1 ... 1
			2048 West Goginan, Card. ... 4 ... 1
			1024 West Phamix ... 18s ... 1
			256 West Sharp Tor ... 1 ... 1
			12000 West Stridgate ... 4s. 6d ... 1
			5000 West Wheel Arthur ... 1 ... 1
			6000 W. Wh. Friendship ... 1 ... 1
			612 Wh. Clinter (lead) ... 1 ... 1
			5000 Wh. Edward ... 2 ... 1
			5000 Wheel Fanny ... 51 12 ... 1
			5000 Wh. Fanny, Perran ... 51 12 ... 1
			512 Wheel Freedom ... 1 ... 1
			1536 Wheel Gill ... 10 ... 1
			2048 Wh. Hender, Crown ... 1 ... 1
			4800 Wheel Ludcott ... 17s ... 1
			6000 Wheel Penryn ... 1 ... 1
			6000 Wheel Pollard ... 1s. 6d ... 1
			10000 Wheel Samson ... 1 ... 1
			4000 Wheel Surprise ... 6 ... 1
			1024 Wheel Trelawny ... 1 ... 1
			3000 Wheel Tristram ... 4s ... 1

Transactions on the Stock Exchange.

Shares.				Paid. Clos. Pr. Bus. Done.				Shares.				Paid. Clos. Pr. Bus. Done.			
100000	Agua Fria	1	...	%	%	...	%	2000	Grand Duchy of Baden.....	1	...	%	...	%	
30000	Anglo-Australian Gold	1	...	%	%	...	%	60000	Liberty	1	...	%	...	%	
100000	Anglo-Californian	1	...	%	%	...	%	10000	Lusitania (of Portugal) ...	1	...	1%	...	%	
20000	Australian	6	...	1 1%	...	1%	...	10815	Marquitta	1	...	%	...	%	
60000	Australian Cordillera	1	...	...	...	...	...	20000	Mexican and South Amer. .	1	...	%	...	%
50000	Ave Maria	1	...	%	%	...	%	90000	New Granada	1	...	%	...	%	
120000	Carsons Creek	1	...	%	%	...	%	200000	Nouveau Monde	1	...	%	...	%	
100000	Colonial Gold	1	...	%	%	...	%	10000	Pontgibaud Silver-lead	20	...	1% 15%	...	10%	
330000	Copper Miners of England. Stock .....	...	...	30	40	...	...	100000	Port Philip	1	...	%	...	%
8000	Ditto, For 7½ per cent. 35 .....	...	...	24	28	...	...	60000	Quartz Rock	1	...	%	...	%
70000	English and Australian Cop. 5 .....	...	...	1 1%	...	1%	...	50000	South Australia	1	...	%	...	%
25000	Fortuna	1	...	%	%	...	%	70000	Waller	1	...	%	...	%	
100000	First National	1	...	%	%	...	%	100000	West Mariposa	1	...	%	...	%	

*. In accordance with an announcement to that effect, we have removed the prices from all mines in the above list where quotations have not been forwarded, or the price given confirmed, for a period of one month: we hope by that means to remove one difficulty,—that of purchasers or sellers being deceived by the quotation in the current Journal being represented as the present value, although the price may have varied considerably since it first appeared. We hope, also, to bring the parties concerned into more frequent communication with regard to any alteration in the present position or prospects of their respective adventures; and, we need hardly add, that we shall be happy to fill up all the blanks, on receipt of the quotation at which the mines has actually been transacted, guaranteed by the name and address of our correspondent.

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their office, No. 26, FINSBURY SQUARE, where all communications are requested to be addressed.—April 28, 1855.